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ENVIRONMENTAL IMPACT STATEMENT

CANON CITY DISTRICT

WILDERNESS PLANNING AMENDMENT

BUREAU
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LAND
MANAGEMENT

U. S.
DEPARTMENT
OF
THE
INTERIOR

IN REPLY REFER TO

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
COLORADO STATE OFFICE
1037 20th STREET
DENVER, CO 80202

NOTICE

Enclosed for your review and comment is the draft environmental impact statement for the Canon City District Management Framework Plan Wilderness Amendment.

The statement is based on information from the Bureau of Land Management and other sources, including information supplied by and in consultation with Federal, state, and local agencies, and interested private organizations and individuals. The purpose of the statement is to disclose in advance the probable environmental impacts of designating or not designating all or portions of wilderness study areas. It also serves to assure that the decision-making process considers environmental as well as economic, technical, and other factors.

We would appreciate receiving your comments on the adequacy, completeness, and accuracy of this analysis. The comment period will run for 90 days after the draft is filed with the Environmental Protection Agency and the notice of receipt is published in the Federal Register. Comments received after the 90-day review period will be considered in the subsequent decision-making process, even though they may arrive too late for inclusion in the final environmental impact statement.

Bob Moore

Assooiate
State Director

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WILDERNESS ENVIRONMENTAL IMPACT STATEMENT

ALTERNATIVES FOR DESIGNATION OF THE WILDERNESS STUDY AREAS WITHIN THE ROYAL GORGE, SAGUACHE, AND SAN LUIS PLANNING UNITS OF THE

Canon City District, Colorado

Bureau of Land Management
Department of the Interior

This environmental impact statement considers four alternatives for seven wilderness study areas (WSAs) in the Royal Gorge, Saguache, and San Luis planning units. These are: Browns Canyon (CO-050-002), 6,614 acres; McIntyre Hills (CO-050-013), 16,800 acres; Lower Grape Creek (CO-050-014), 11,220 acres; Beaver Creek (CO-050-016), 26,150 acres; Upper Grape Creek (CO-050-017), 10,200 acres; Sand Castle (CO-050-135), 1,644 acres; and San Luis Hills (CO-050-141), 10,240 acres. Alternatives A, B, C, and D analyze and compare the suitability of various units for designation or nondesignation for wilderness. A preferred alternative is identified for each WSA.

For further information please write:

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Royal Gorge Resource Area
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Canon City, Colorado 81212

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Please submit comments to the above address by: **December 6, 1982**

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SUMMARY

Seven wilderness study areas, totaling 82,868 acres, have been identified on public lands administered by the Bureau of Land Management in the Canon City District of south-central Colorado. Of these, 25,258 acres are proposed to be recommended for inclusion in the National Wilderness Preservation System. In this draft environmental impact statement each wilderness study area is studied and evaluated in accordance with wilderness study policy. Four alternatives, including Alternative A - All Wilderness Designation, Alternative B - No Wilderness Designation (No Action), Alternative C - Partial Wilderness Designation - I, and Alternative D - Partial Wilderness Designation - II are considered. Application of these alternatives vary with each wilderness study area, however, Alternative A - All Wilderness Designation and Alternative B - No Wilderness Designation (No Action) are always considered for each area. The preferred alternative is indicated in parentheses after each alternative. All recommendations within this document are preliminary and subject to administrative review. Following is a summary of each wilderness study area:

The following table shows acres recommended and not recommended, by unit, for the preferred alternative.

WSA	Acres Recommended	Acres Not Recommended
Browns Canyon (002)	6,614	-0-
McIntyre Hills (013)	-0-	16,800
Lower Grape Creek (014)	-0-	11,220
Beaver Creek (016)	17,000	9,150
Upper Grape Creek (017)	-0-	10,200
Sand Castle (135)	1,644	-0-
San Luis Hills (141)	-0-	10,240
TOTAL	25,258	57,610

BROWNS CANYON (CO-050-002)

Alternative A - All Wilderness Designation (Preferred Alternative) wilderness designation is recommended for 6,614 acres.

This WSA exhibits outstanding opportunity for primitive and unconfined recreation and solitude. No major resource conflicts with wilderness have been identified. However, the unit does contain 17 mining claims which would be subject to regulations governing ingress and egress as prescribed by the Secretary of the Interior. Some mineral exploration has taken place in the past, however, there is no known mineral potential economically feasible to develop at this time.

Back-country vehicle use and forestry woodland harvest (89,930 cords in the long term) would be prohibited. Existing woodlands are considered low volume per acre.

This unit could easily be managed as a wilderness area. The unit is narrow at certain locations, however, it is bordered on the west by rocky cliffs, the Arkansas River, and Denver and Rio Grande Railroad tracks. On the east the U.S. Forest Service manages the Aspen Ridge Roadless Area. The Forest Service plans to manage this area for its primitive values which would be compatible with wilderness. Lands to the north and south are managed by BLM, and land use plans are compatible with wilderness. Wilderness values would be preserved.

Alternative B - No Wilderness Designation (No Action).

No acres are recommended for wilderness designation under this alternative. If this alternative were adopted wilderness values would be adversely affected by the surface disturbing activities of back-country vehicles use, mining, and timber harvest.

Alternatives C and D - Partial Wilderness Designation - I and II

Due to the size of this WSA (6,614 acres) and since no resource conflicts nor manageability problems would be changed by a logical boundary adjustment, no partial wilderness designation alternative was studied for this unit.

McINTYRE HILLS (CO-050-013)

Alternative A - All Wilderness Designation

Under this alternative 16,800 acres would be recommended. McIntyre Hills does not display any unusual or outstanding characteristics for wilderness. This unit is very typical of lands in southern Colorado. If this alternative were selected some resource values would be lost in order to preserve wilderness values. A proposed forestry firewood harvest (7,735 cords, short term) would be prohibited. The woodlands resource in this unit is considered more valuable than in other WSAs because of the high present volume per acre. Access could be restricted on 85 mining claims and 410 acres of non-Federal inholdings (private land surrounded by Federal). Wilderness values would be preserved.

Alternative B - No Wilderness Designation (No Action) (Preferred Alternative)

No acres in this wilderness study area are recommended for inclusion in the National Wilderness Preservation System.

Range improvement projects (pinon-juniper thinning), off-road vehicle use, and firewood harvest would be permitted. Impacts resulting from these actions would affect solitude, naturalness, and primitive recreation values in the long term on approximately 11 percent of this unit. Mining would adversely affect wilderness values, however, cursory inventories have found little potential for development.

By applying the recreation opportunity spectrum (ROS) to this unit, 65 percent of the WSA falls into the semiprimitive motorized and roaded natural category. Generally this unit is very typical of southern Colorado and is not considered to contain quality wilderness characteristics.

Alternative C - Partial Wilderness Designation - I

This alternative would include approximately 15,200 acres to be recommended for wilderness designation. Boundary adjustments would make this unit more manageable and would omit two patented mining inholdings, a telephone right-of-way along U.S. Highway 50, and a potential firewood sale area along the southern boundary.

Alternative D - Partial Wilderness Designation - II

Since no resource conflicts nor manageability problems would be changed by a logical boundary adjustment, no Alternative D was studied for this unit.

LOWER GRAPE CREEK (CO050-014)

Alternative A - All Wilderness Designation

Little extensive mineral exploration has been done in this unit, however, there has recently been considerable interest in exploration and possible development of base and precious metals. A wilderness designation could restrict access to 67 mining claims and 75 acres of non-Federal inholdings.

This alternative would restrict back-country vehicle use by 100 annual recreation days. Wilderness values would be preserved.

Alternative B - No Wilderness Designation (No Action) (Preferred Alternative)

Under this alternative development of the mineral potential in this WSA would not be restricted by wilderness guidelines. In addition to the mineral potential, there is a cumulative impact in the western portion of the unit from previous mining activity.

Uses of the land including back-country vehicle use and mineral development would adversely impact solitude, naturalness, and primitive recreational values in the long term on approximately 20 percent of the unit.

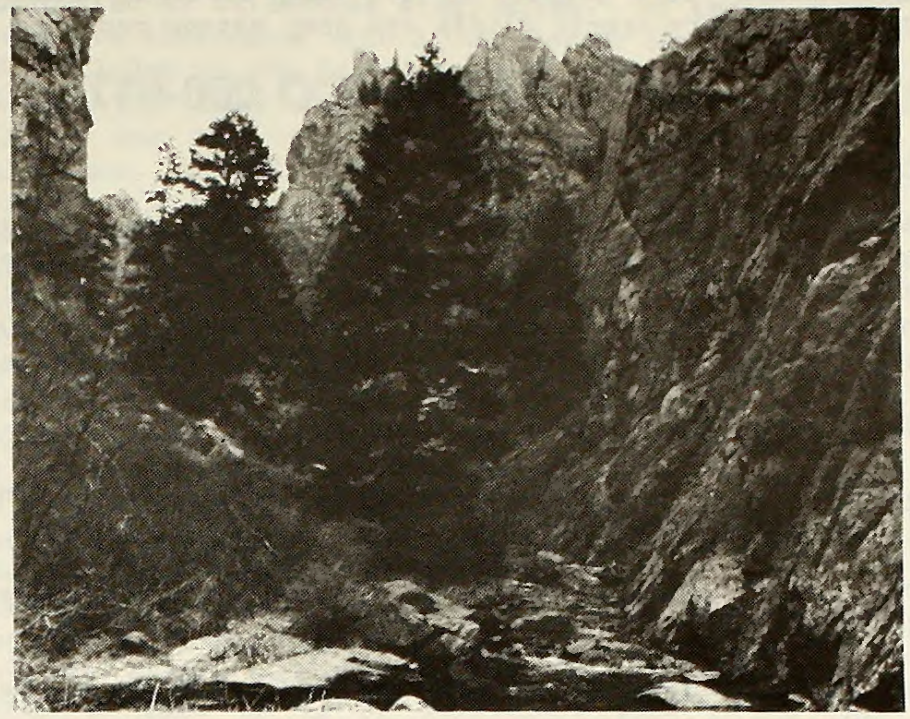
Alternative C - Partial Wilderness Designation - I

This alternative includes two boundary adjustments and approximately 7,300 acres to be recommended for wilderness designation. The first adjustment omits Horseshoe Mountain with the boundary starting at the Tights and running up the unnamed drainage to Marsh Gulch. This would omit two peripheral patented mining claims. The other adjustment omits the land west of Goat Park Gulch because of the cumulative impact of past mining operations. This alternative does not omit a mineralized zone which runs from Jennings Gulch to Goat Park Gulch. To include this zone with the other lands omitted under this alternative would leave less than 5,000 acres to be recommended for wilderness designation.

Alternative D - Partial Wilderness Designation - II

Since no resource conflicts nor manageability problems would be changed by a second logical boundary adjustment, no Alternative D was studied for this unit.

BEAVER CREEK (CO-050-016)



Alternative A - All Wilderness Designation

With the exception of 4,000 acres in the southwestern portion of the WSA, no significant resource conflicts exist. Wilderness restrictions on the southwestern portion of this unit would prohibit the harvest of 75,670 cords of firewood in the long term and access could be restricted on two mining claims. In addition approximately 1,188 visitor days would be lost in Phantom Canyon (picnicking and camping) as a result of wilderness designation.

Wilderness values would be protected under this alternative.

Alternative B - No Wilderness Designation (No Action)

If this WSA were not designated wilderness, management would be to protect the primitive values, therefore, most wilderness values probably would not be affected. However, the southwestern corner of the unit contains some firewood potential as discussed in Alternative A. If this firewood were harvested the primitive values for this land would be lost for the long term.

Alternative C - Partial Wilderness Designation - I

This boundary change omits 250 acres along Phantom Canyon. Harvest of 75,670 cords of firewood on 3,290 operable acres would be prohibited, however, no recreational opportunities would be lost.

Alternative D - Partial Wilderness Designation - II (Preferred Alternative)

This alternative includes 17,000 acres for wilderness designation. Three boundary adjustments (omitting 5,150 acres) were made to make the unit more manageable as wilderness. Additionally 4,000 acres in the southwestern portion of the WSA were omitted because of manageability and conflicts with recreation and woodlands resources.

No significant resource values would be lost with wilderness designation.

These boundary adjustments omit lands with resource

conflicts and narrow spurs of land which would be difficult to manage as wilderness. The remaining portion of the unit (17,000 acres) which would be recommended for designation is a concentrated configuration of land with outstanding opportunities for primitive and unconfined recreation and solitude. Additionally this portion of the unit contains Beaver Creek with very scenic cliffs and deep narrow canyons.

UPPER GRAPE CREEK (CO-050-017)

Alternative A - All Wilderness Designation

Designation would preclude the harvest of 21,206 cords of firewood in the long term and prohibit back-country vehicle travel (which is currently around 100 annual recreation days). Restrictive access could impact 30 acres of non-Federal inholdings and 148 existing mining claims. There is no legal access to this unit. Wilderness values would be preserved.

Alternative B - No Wilderness Designation - No Action (Preferred Alternative)

This alternative recommends no acreage for wilderness designation.

Wilderness values would be lost on approximately 19 percent of this unit as a result of proposed projects by other resources.

Alternative C - Partial Wilderness Designation - I

The size of the unit in this alternative would be approximately 9,600 acres. The boundary was adjusted to exclude approximately 360 acres in the northeast corner along Grape Creek. Omitting this narrow arm would result in a more concentrated and manageable unit excluding an area that would be difficult to manage because of back-country vehicle use. An additional 240 acres excluded under this alternative omits patented mining lands along the eastern boundary.

Alternative D - Partial Wilderness Designation - II

Since no resource conflicts nor manageability problems would be changed by a second logical boundary adjustment, no Alternative D was studied for this unit.

SAND CASTLE (CO-050-135)

Alternative A - All Wilderness Designation (Preferred Alternative)

This 1,644-acre WSA is contiguous with the Great Sand Dunes Wilderness Area managed by the National Park Service. Designation of this unit as wilderness would preserve the wilderness characteristics and compliment the wilderness values of the Great Sand Dunes.

Alternative B - No Wilderness Designation (No Action)

No significant resource values would be affected.

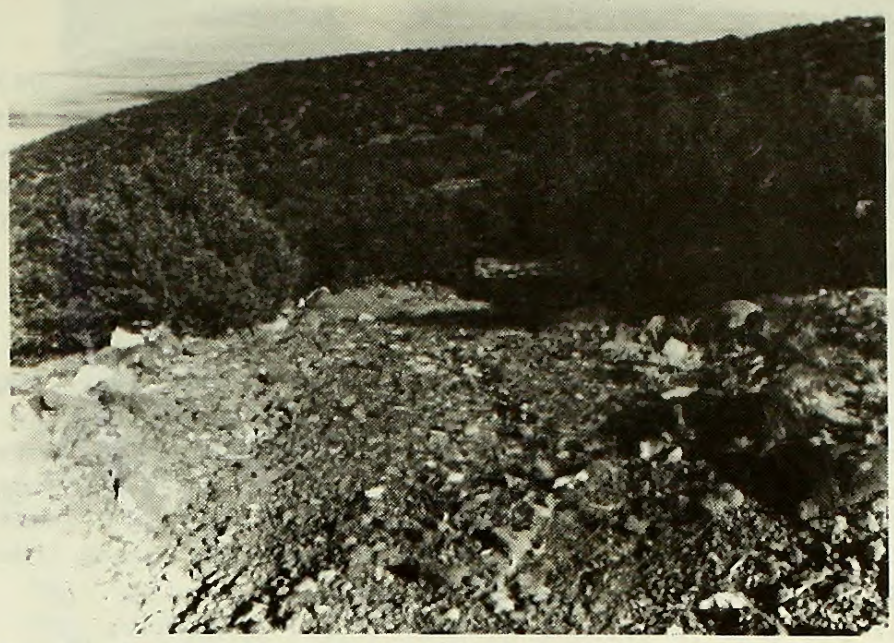
Alternative C - Partial Wilderness Designation - I

This WSA is contiguous with the Great Sand Dunes Wilderness Area. One 160-acre parcel of the unit is located approximately 7 miles from the majority of the unit. This alternative would omit the isolated parcel for manageability reasons and recommends approximately 1,484 acres for wilderness designation.

Alternative D - Partial Wilderness Designation - II

Since no resource conflicts nor manageability problems would be changed by a second logical boundary adjustment, no Alternative D was studied for this unit.

SAN LUIS HILLS (CO-050-141)



Alternative A - All Wilderness Designation

Recently there has been considerable interest in mineral exploration and development in the northeast portion of the unit. Designation could restrict access on 85 existing mining claims.

In addition to restricting potential mineral development, a wilderness designation would prohibit back-country vehicle travel which is currently 75 annual recreation days.

The San Luis Hills WSA has some opportunities for primitive types of recreation and solitude. These characteristics are considered average in quality and would be preserved under this alternative.

Alternative B - No Wilderness Designation - No Action (Preferred Alternative).

None of this unit would be recommended for wilderness designation. Projects/uses in recreation (back-country) and wildlife would be permitted along with mineral exploration and development. These would have an adverse impact on solitude, naturalness, and primitive recreational values in the long term on approximately 20 percent of this unit.

Alternative C - Partial Wilderness Designation - I

This alternative includes making three boundary changes and leaving approximately 7,440 acres to be recommended for wilderness designation. The current southeastern boundary follows the legal land status and is difficult to find on the ground. The alternative boundary would be withdrawn to the beginning of the hills and omit approximately 1,360 acres. The northern boundary would be adjusted to exclude approximately 1,440 acres with possible mineral potential and some mineral exploration pits. This boundary adjustment also excludes a state section inholding.

While this alternative would exclude the resource conflicts (except back-country vehicle travel) many of the wilderness values in the unit could be lost on those areas omitted from the WSA.

Alternative D - Partial Wilderness Designation II

Since no resource conflicts nor manageability problems would be changed by a second logical boundary adjustment, no Alternative D was studied for this unit.

CHAPTER I - PURPOSE AND NEED

One portion of Federal Land Policy and Management Act (FLPMA) (Section 603(a)) directs the Secretary of the Interior and BLM to inventory public lands under its jurisdiction to identify those with wilderness characteristics. These identified lands must then be studied for determination of suitability or nonsuitability for wilderness designation. Based on an evaluation of all resource use/values in each area determined to contain wilderness characteristics, the Secretary must report his recommendations to the President, no later than October 21, 1991, on whether or not areas should be designated as wilderness. The President must report his final recommendations to Congress within 2 years and they will decide whether or not any of the areas are to be designated wilderness.

This environmental impact statement (EIS) analyzes the potential impacts of designating or not designating seven wilderness study areas (WSAs) totaling 82,868 acres as part of the National Wilderness Preservation System.

There are eleven WSAs within the Royal Gorge and San Luis Resource Areas of the Canon City District (see Map I-1). Four of these are contiguous to a U.S. Forest Service wilderness study area. Black Canyon CO-050-131, South Piney Creek CO-050-132B, Papa Keal CO-050-137, and Zapata Creek CO-050-139 WSAs, totaling 4,910 acres, will be included in the U.S. Forest Service study of the Sangre de Cristo Range. The remaining seven WSAs under study are shown in the following table:

Table I-1

SEVEN WSAs ANALYZED IN THE CANON CITY DISTRICT WILDERNESS EIS

Unit #	Name	Acres
CO-050-002	Browns Canyon	6,614
CO-050-013	McIntyre Hills	16,800
CO-050-014	Lower Grape Creek	11,220
CO-050-016	Beaver Creek	26,150
CO-050-017	Upper Grape Creek	10,200
CO-050-135	Sand Castle	1,644
CO-050-141	San Luis Hills	10,240
TOTAL		82,868

The BLM wilderness program is a result of FLPMA of 1976 (Public Law 94-579). FLPMA gives basic guidance to BLM from Congress on management of the 470 million acres of public land.

To accomplish the mandate of Section 603 of FLPMA, BLM has developed a framework for the wilderness review process which has three phases:

INVENTORY

This phase involves examining the public lands to determine and locate the existence of areas containing wilderness resources that meet the criteria established by Congress. Such areas are identified as wilderness study areas.

The inventory phase of the process was completed for Canon City District WSAs in November 1980. There were 87,778 acres found to contain wilderness values and identified as wilderness study areas. Of these, 4,910 acres are contiguous with a U.S. Forest Service WSA and are included in the Forest Service Wilderness EIS. In determining these wilderness values, the law directs BLM to use the criteria given by Congress in the Wilderness Act of 1964. Section 2(c) of that act states: "A Wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain. An area of wilderness is further defined to mean in this Act an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunity for solitude or a primitive and unconfined type of recreation; (3) has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historic value."

These characteristics are explained in detail in the Wilderness Inventory Handbook - Policy, Direction, and Procedures and Guidance for Conducting Wilderness Inventory on the Public Lands; September 1978. This handbook is available in the Canon City District Office.

McIntyre Hills

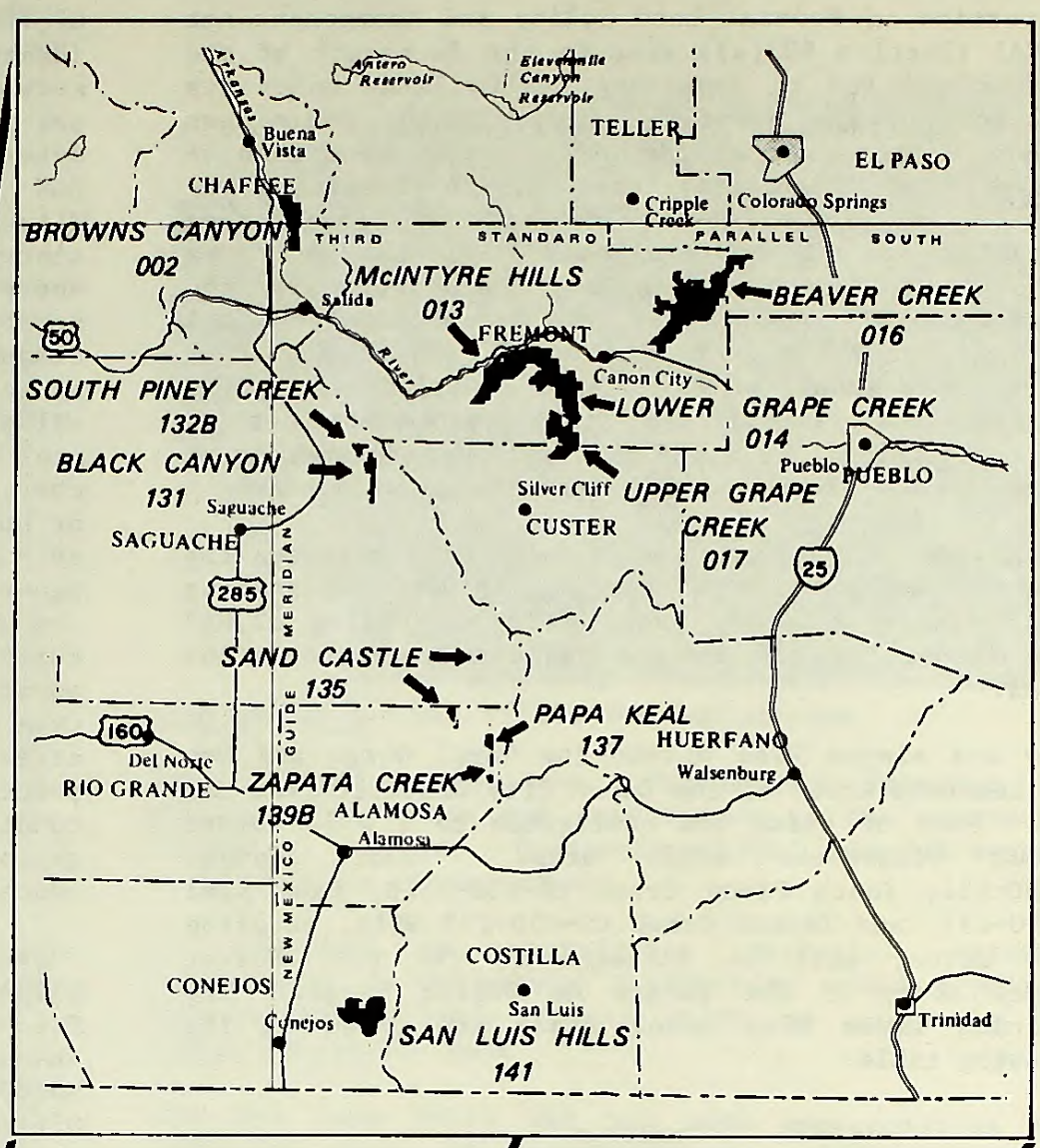
STUDY

This phase involves the process of determining, through careful analysis, which wilderness study areas will be recommended as suitable for wilderness designation and which will be recommended as nonsuitable. These determinations, made through the BLM land use planning system, consider all values, resources, and uses of the public lands.

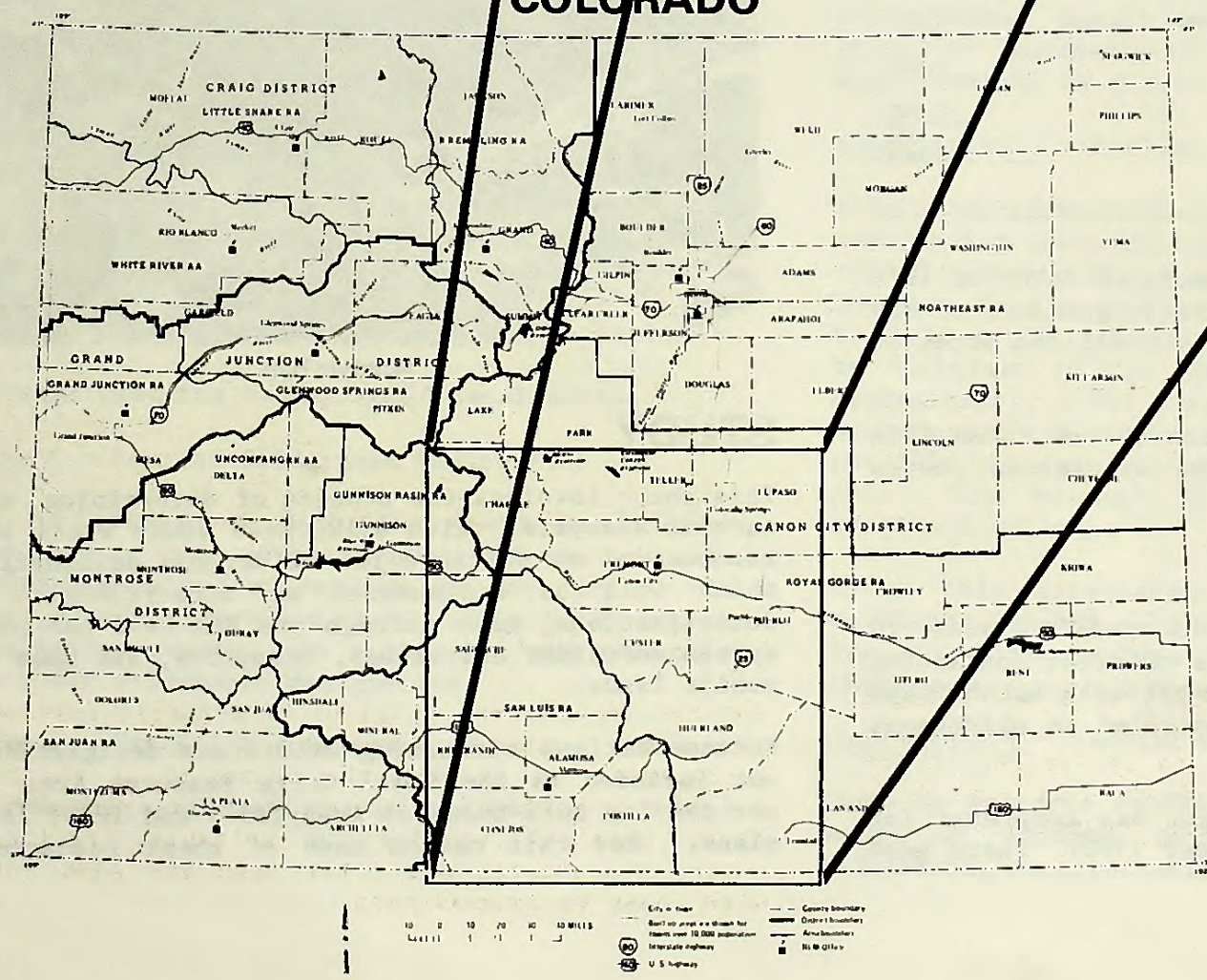
Recommendations concerning wilderness designation were not included in the Royal Gorge Resource Area (1979) nor the San Luis Resource Area (1973 and 1975) land use plans. For this reason each of these resource area

MAP I-1 EIS LOCATION

& LOCATION OF 11 WSA's IN THE CANON CITY DISTRICT



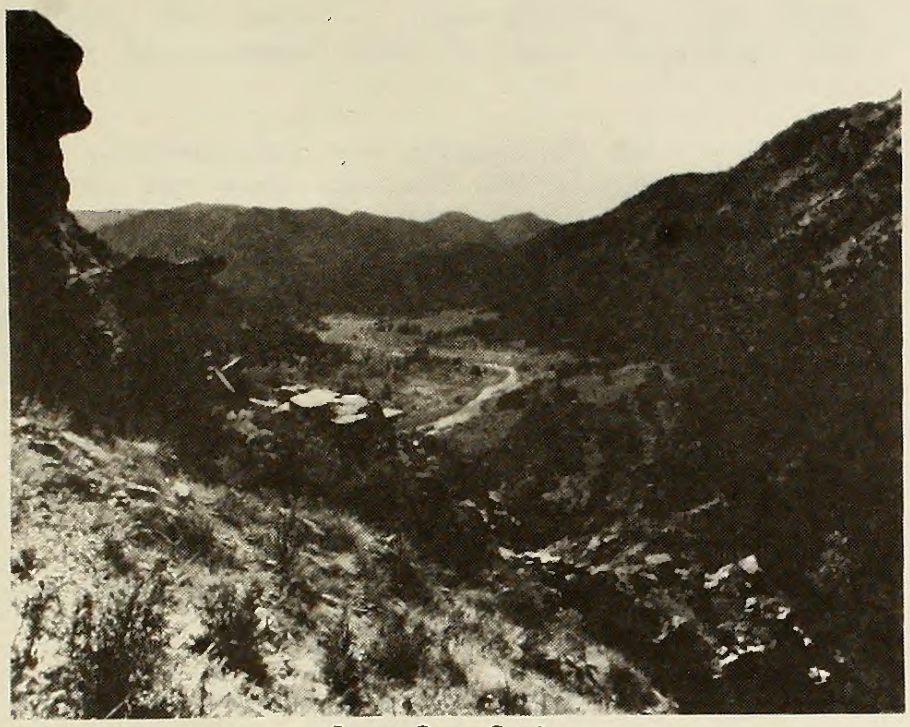
COLORADO



plans is being amended to include a review of wilderness values and appropriate designation as required by FLPMA. Guidance for the amendment process comes from the following sources: The Wilderness Study Policy, the National Environmental Policy Act (regulations in F.R./Vol. 43, No. 230, November 29, 1978), the Wilderness Act of 1964, and the BLM Planning Regulations (published in F.R./Vol. 44, No. 153, August 7, 1979).

The wilderness amendment process is best described as a flowing, continuous procedure but with certain steps that need to be understood. The following is a brief outline of these important steps.

First, wilderness issues were identified. These issues are the conflicts that must be evaluated before any recommendations on the suitability or nonsuitability as wilderness can be made. From these issues, criteria are developed that direct how the evaluation will be made.



Lower Grape Creek

A total of 22 public meetings/workshops were used to identify the issues. In addition the Wilderness Study Policy identified national issues and criteria. See Appendix A for a detailed description of criteria.

The second step, evaluation, assessed the impacts that wilderness designation would have and compared the losses and gains. Boundary adjustments were identified for some study areas and assessed. This information was recorded as the Management Situation Analysis (MSA).

From these evaluations and findings preliminary alternatives were developed and four open houses were held in January 1982. The public was asked to comment on these preliminary alternatives to determine if they would be sufficient for assessment of wilderness suitability in an environmental impact statement (EIS).

This draft EIS documents, for public review and comment, the results of impact assessment for the alternatives one of which at this time is preferred for the various WSAs.

Publication of this draft EIS (DEIS) will be followed by a public comment period including formal public hearings. Comments will be used to revise this draft and prepare a final EIS (FEIS) which will include a proposal for recommending wilderness designation.

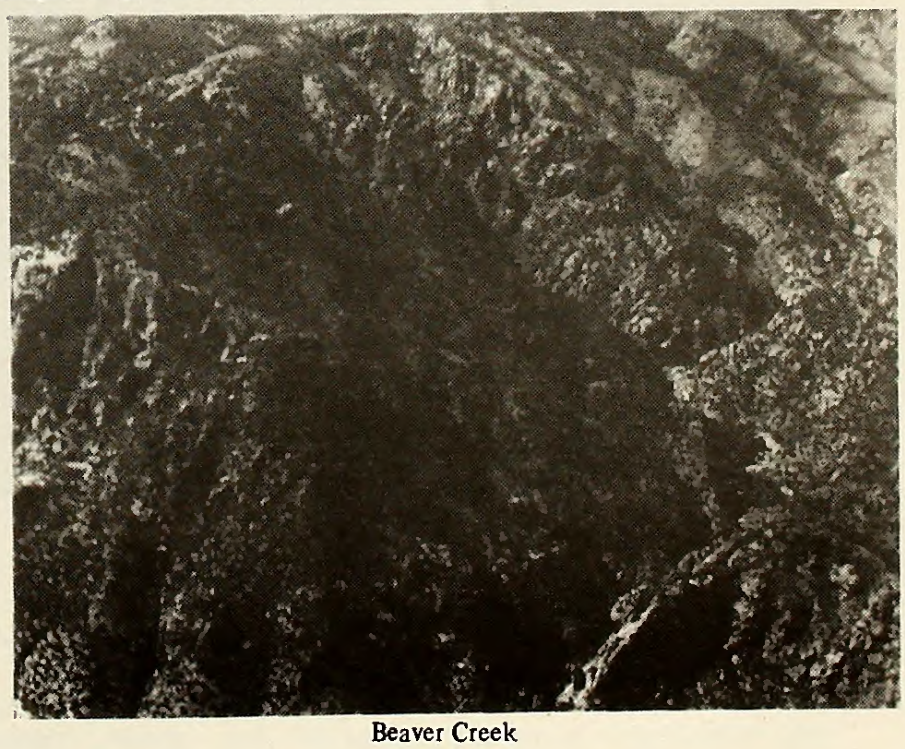
Note that all planning documents and maps not included in this DEIS are available at the Canon City District, Royal Gorge Resource Area, San Luis Resource Area, or Northeast Resource Area office.

Issues

a. Public Opinion
b. Energy and Critical Minerals
c. Consistency with Other Plans
d. Impacts on Other Resources
e. Impacts on Wilderness
f. Quality of Wilderness
g. Social and Economic Effects
h. Diversity in the Wilderness System
i. Maximization of Public Benefits
j. Manageability

Criteria

a. Evaluation of Wilderness Values
b. Impacts on Other Resources
c. Impacts on Wilderness
d. Energy and Critical Mineral Resource Values
e. Local and Regional Socio-Economic Effects
f. Diversity in the National Wilderness Preservation System
g. Consistency with Other Plans
h. Public Comment
i. Manageability: The area must be capable of being effectively managed to preserve the wilderness character.



Beaver Creek

REPORTING

The reporting phase consists of actually forwarding or reporting these suitable and nonsuitable recommendations through the Secretary of the Interior and the President to Congress. Mineral surveys on those WSAs recommended as suitable, environmental impact statements, and other data are also submitted with these recommendations.

CHAPTER II - DESCRIPTION OF ALTERNATIVES

GENERAL DESCRIPTION

Four alternatives are considered in this document (refer to Table II-1). These include: Alternative A - All Wilderness Designation; Alternative B - No Wilderness Designation (No Action); Alternative C - Partial Wilderness Designation - I; and Alternative D - Partial Wilderness Designation - II. The All Wilderness Designation alternative and No Wilderness Designation alternative are considered for each WSA. Additionally Partial Wilderness Designation I and Partial Wilderness Designation II are studied for some of the WSAs when appropriate. The purpose of the last two alternatives is to change the boundary to omit lands with resource conflicts or manageability problems. This boundary change in turn would possibly make the unit more appropriate for wilderness designation compared with the All Wilderness Designation alternative.

In Bureau initiated actions, such as these wilderness studies, the "proposed action" and the agency "preferred alternative" are the same. For the sake of consistency and ease of understanding, the term "preferred alternative" will be used throughout the EIS.

As the alternatives are discussed the preferred alternative for each WSA will be identified. This alternative has been identified based on resource conflicts identified, manageability, and public involvement throughout the planning process. These preliminary recommendations are subject to administrative review.

Table II-1

WILDERNESS ALTERNATIVES
FOR THE
CANON CITY DISTRICT

WSAs	Alternatives			
	A - All Wilderness Designation	B - No Wilderness Designation (No Action)	C - Partial Wilderness Designation-I	D - Partial Wilderness Designation-II
Browns Canyon CO-050-002 (6,614 acres)	Preferred Alternative	X (0 acres)	N/A	N/A
McIntyre Hills CO-050-013 (16,800 acres)	X (16,800 acres	Preferred Alternative (0 acres)	X (15,200 acres)	N/A
Lower Grape Creek CO-050-014 (11,220 acres)	X (11,220 acres)	Preferred Alternative (0 acres)	X (7,300 acres)	N/A
Beaver Creek CO-050-016 (26,150 acres)	X (26,150 acres)	X (0 acres)	X (20,750 acres)	Preferred Alternative (17,000 acres)
Upper Grape Creek CO-050-017 (10,200 acres)	X (10,200 acres	Preferred Alternative (0 acres)	X (9,600 acres)	N/A
Sand Castle CO-050-135 (1,644 acres)	Preferred Alternative (1,644 acres)	X (0 acres)	X (1,484 acres)	N/A
San Luis Hills CO-050-141 (10,240 acres)	X (10,240 acres)	Preferred Alternative (0 acres)	X (7,440 acres)	N/A

X = Alternative analyzed but not recommended.
N/A = Alternative is not analyzed in EIS.

ALTERNATIVES CONSIDERED BUT ELIMINATED

In studying the WSAs, various other alternatives were considered but dropped from further analysis. The reasons for not pursuing these alternatives in detail are discussed below.

The Browns Canyon unit, 6,614 acres, is the only WSA studied in this DEIS which only has two alternatives; All Wilderness and No Wilderness Designation. The portion of the unit north of Middle Cottonwood Creek was recommended in the MFP (if not designated wilderness) to be managed for semiprimitive motorized objectives which permits back-country vehicle use. A possible alternative could have been to omit everything from this unit north of Middle Cottonwood Creek. This alternative was not considered feasible since it would have made the unit considerably less than 5,000 acres. Since no other boundary adjustment would avoid this resource conflict and maintain the size of the unit larger than 5,000 acres, this alternative was not considered further.

The Lower Grape Creek WSA (11,220 acres) has a mineralized zone (copper, lead, silver) extending across the unit from Jennings Gulch to Goat Park Gulch.

Because of the high mineral potential in this area an alternative omitting the land south of this zone was considered. However, this boundary change would have omitted the scenic Grape Creek from the unit and left a portion which contains the cumulative impacts of old mines. For these reasons this alternative was not included in this DIES.

McIntyre Hills, Lower Grape Creek, Upper Grape Creek, Sand Castle, and San Luis Hills were not considered for Alternative D - Partial Designation - II.

Browns Canyon

No measurable degree of resource conflict resolution would occur with any logical boundary adjustments. No measurable gain in manageability would occur for any of these units by any other reasonable boundary changes. Beaver Creek WSA did have a second logical boundary adjustment which did mitigate resource conflicts and enhance manageability.

ISSUES OF PUBLIC CONCERN

Throughout the wilderness review process greater than average public interest has been expressed about two units.

There has been local concern for mineral potential in the San Luis Hills WSA (141). Local people are worried that designation of the unit as wilderness will result in use curtailments and economic hardship. Another concern has been expressed that air quality standards for the Beaver Creek WSA (016) might become more stringent if it were to become a wilderness area. The Department of the Interior will not recommend reclassification to the more strict Class I Air Quality classification in connection with future wilderness recommendation resulting from the BLM wilderness review. The two processes are separate and distinct and are accomplished under two different laws; FLPMA and the Clean Air Act. Recommendations for wilderness designation are made by BLM through the Secretary of the Interior and the President to Congress.

Air quality reclassification is the prerogative of the states and must follow a process managed by the Clean Air Act Amendments of 1977, involving a study of health, environmental, economic, social, and energy effects, a public hearing, and a report to the Environmental Protection Agency (EPA).

The EPA is responsible for development and enforcement of various environmental protection standards including air quality. The quality of air resources is determined by the concentration of air pollutants, visibility, and odors in the atmosphere.

In order to monitor air quality, three air quality classes or standards have been set. These classes very briefly include:

Class I - minimal additional deterioration in air quality permitted.

Class II - moderate additional deterioration in air quality permitted (most BLM lands).

Class III - greater deterioration for planned maximum growth permitted (industrial area).

ALTERNATIVES

Table II-1, shows in summary form, the alternatives, including the preferred alternative for each WSA.

ALTERNATIVE A

All Wilderness Designation

All units in the Canon City District would be recommended for wilderness designation with current WSA boundaries (see Map II-1). This alternative recommends 82,868 acres for wilderness designation.

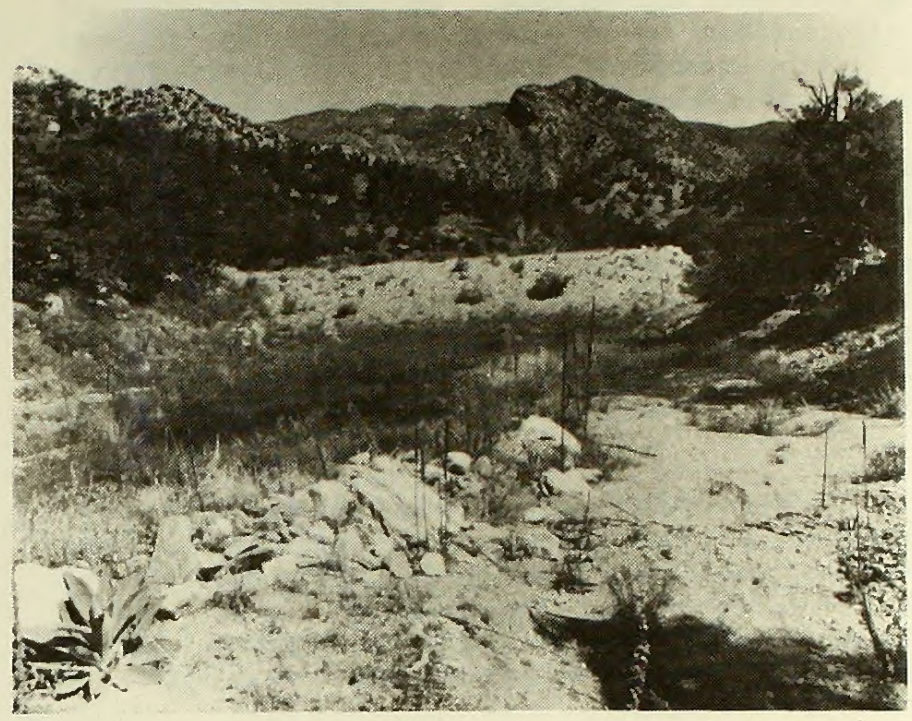
This alternative would preserve wilderness resources present in all the units. Utilization of energy, minerals, timber, and other resources in the WSAs would be restricted.

ALTERNATIVE B

No Wilderness Designation (No Action)

Under this alternative there would be no WSAs recommended for wilderness designation in the Canon City District. Management would be in accordance with existing management framework plans (MFPs). Based on the available information in the MFPs the following uses might occur in the WSA if not designated wilderness.

Name	Existing and /or Possible Future Uae
Browna Canyon	Semiprimitive, scenic area, back-country vehicle uae
McIntyre Hilla	Firewood aalea, grazing
Lower Grape Creek	Mineral potential, grazing
Beaver Creek	Primitive recreation
Upper Grape Creek	Mineral potential, grazing
Sand Castle	Wildernesa uae - adjacent to Great Sand Dunea Monument
San Luia Hills	Back-country vehicle uae, mineral potential, grazing



McIntyre Hills

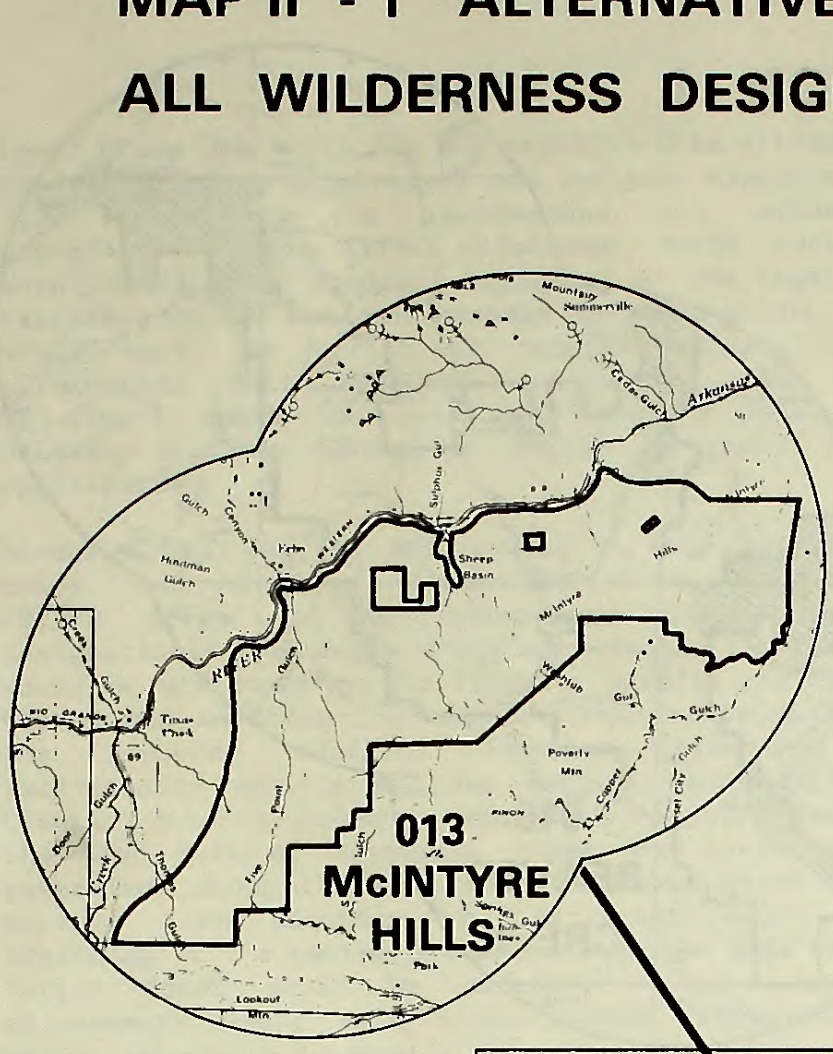
ALTERNATIVE C Partial Wilderness Designation - I

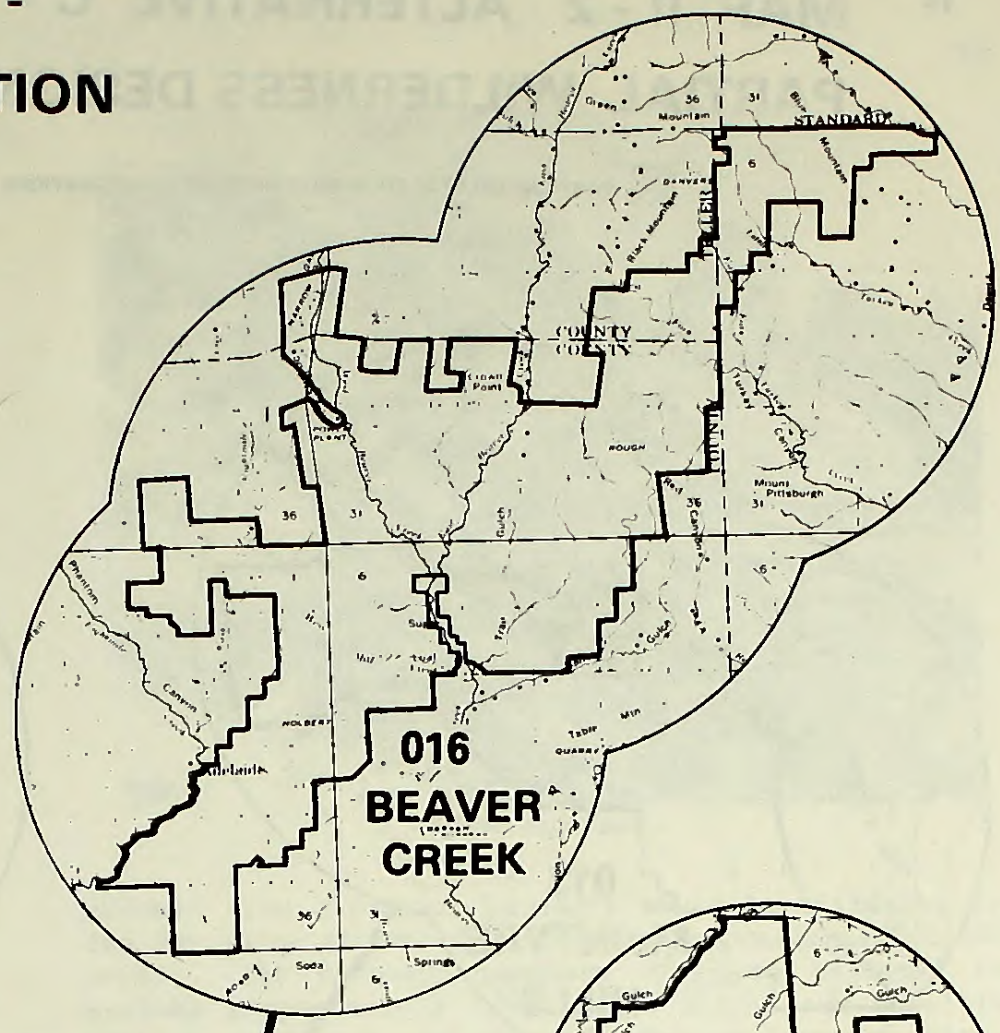
Partial areas of all study units in the Canon City District except Browns Canyon WSA (CO-050-002) are recommended for wilderness designation (see Map II-2). This alternative in general is the same as Alternative A except for boundary changes resulting in reduced acreage (68,384 acres recommended). These boundary changes are made for manageability reasons and to mitigate conflicts with other resources.

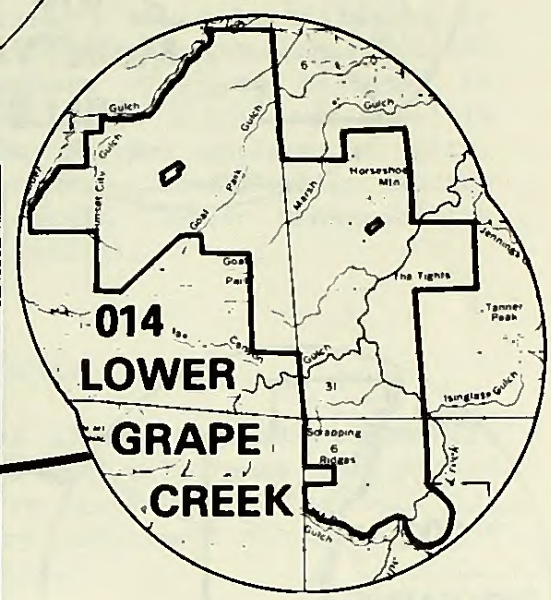
Browns Canyon (6,614 WSA acres) - Due to the size of this WSA and since no resource conflicts nor manageability problems would be changed by a logical bondary adjustment no partial wilderness designation alternative was studied for this unit. This is explained in more detail earlier in this chapter under Alternatives Considered but Eliminated.

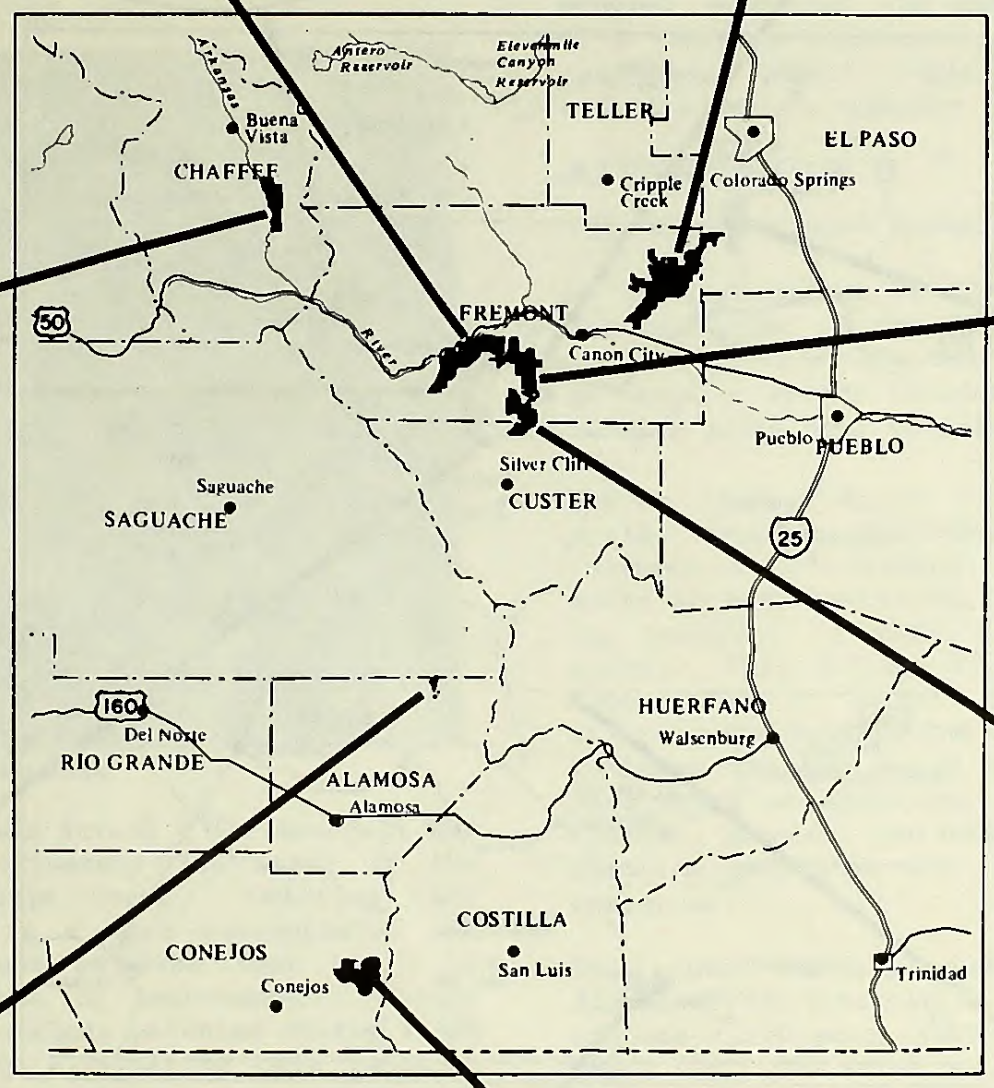
McIntyre Hills (16,800 WSA acres) - This alternative would include approximately 15,200 acres to be recommended for wilderness designation. The boundary has been adjusted to omit two patented mining inholdings, a powerline right-of-way along U.S. Highway 50, and a potential firewood sale area along the southern boundary.

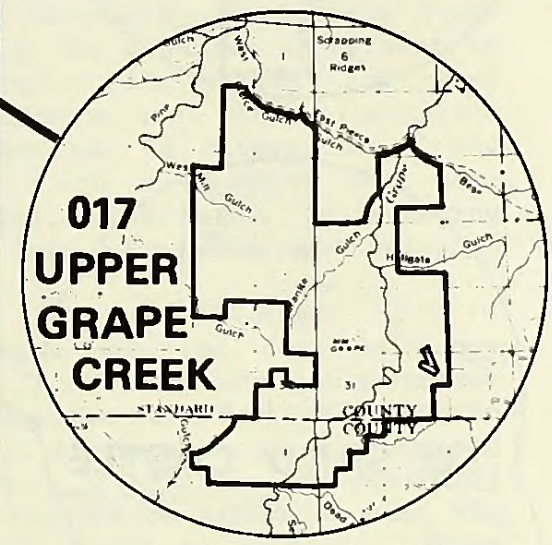
MAP II - 1 ALTERNATIVE A - ALL WILDERNESS DESIGNATION

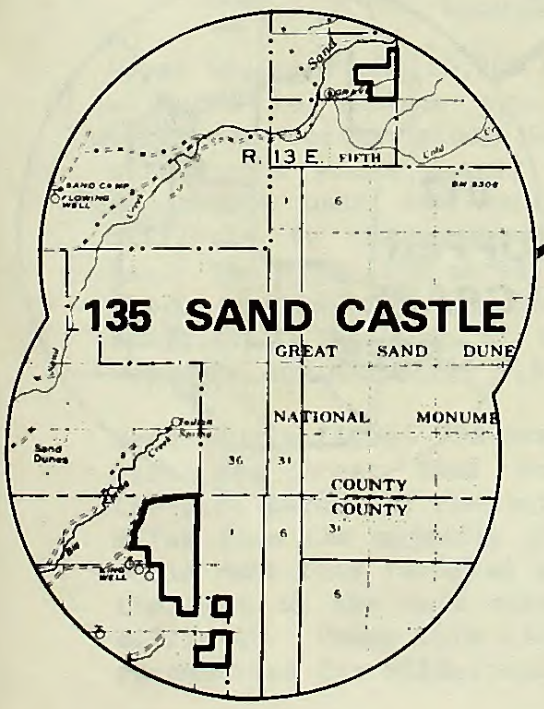


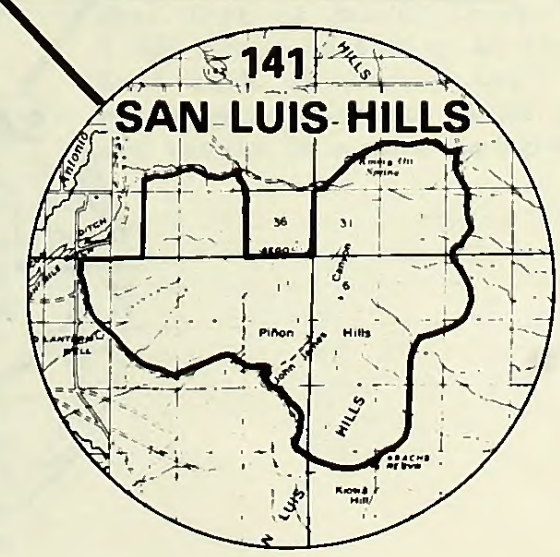






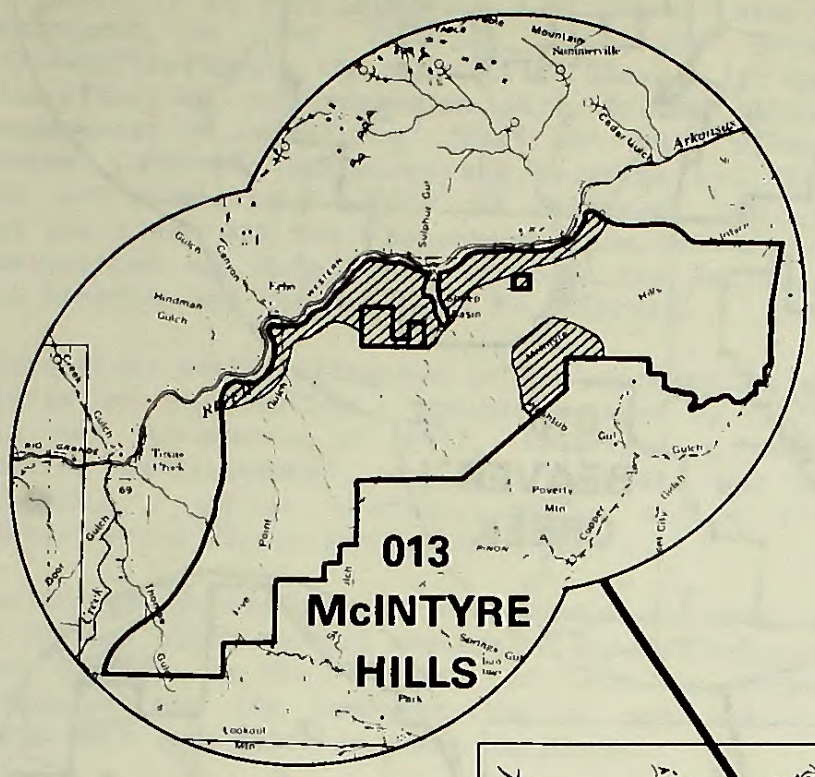


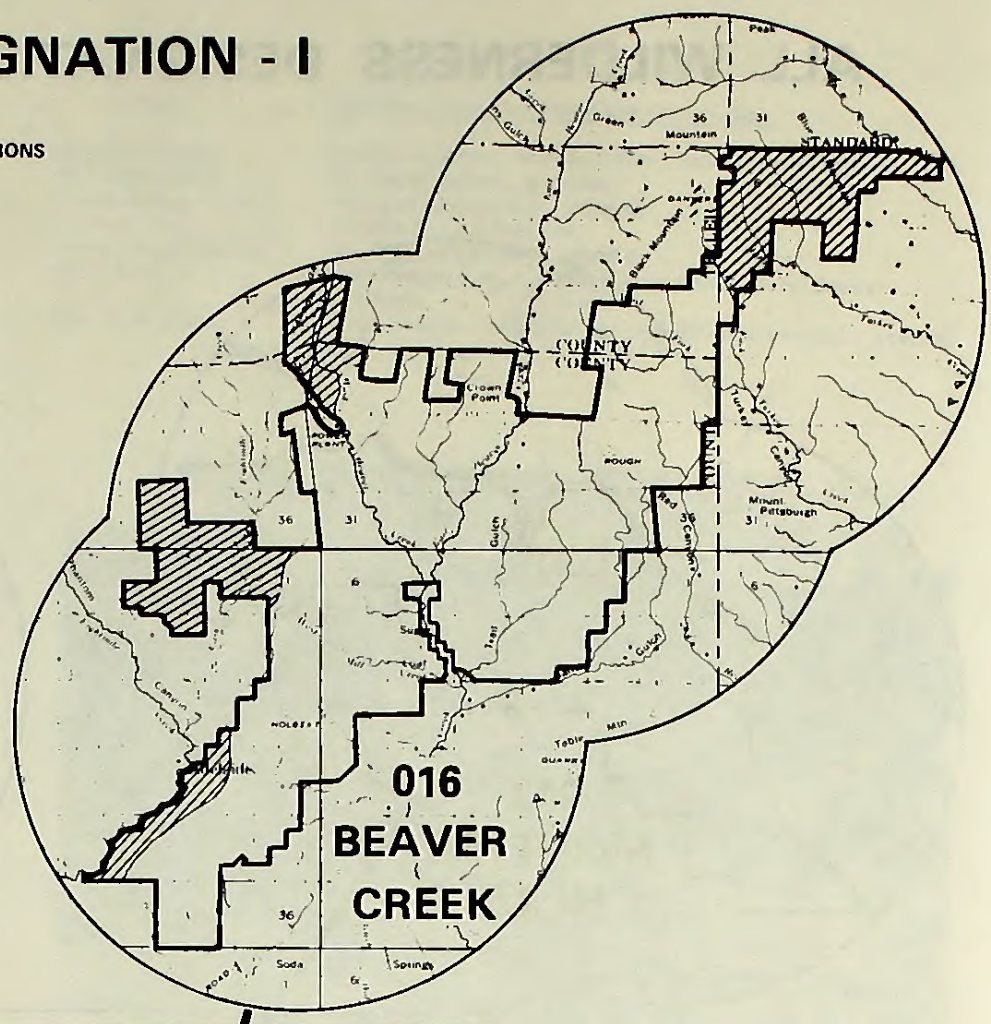


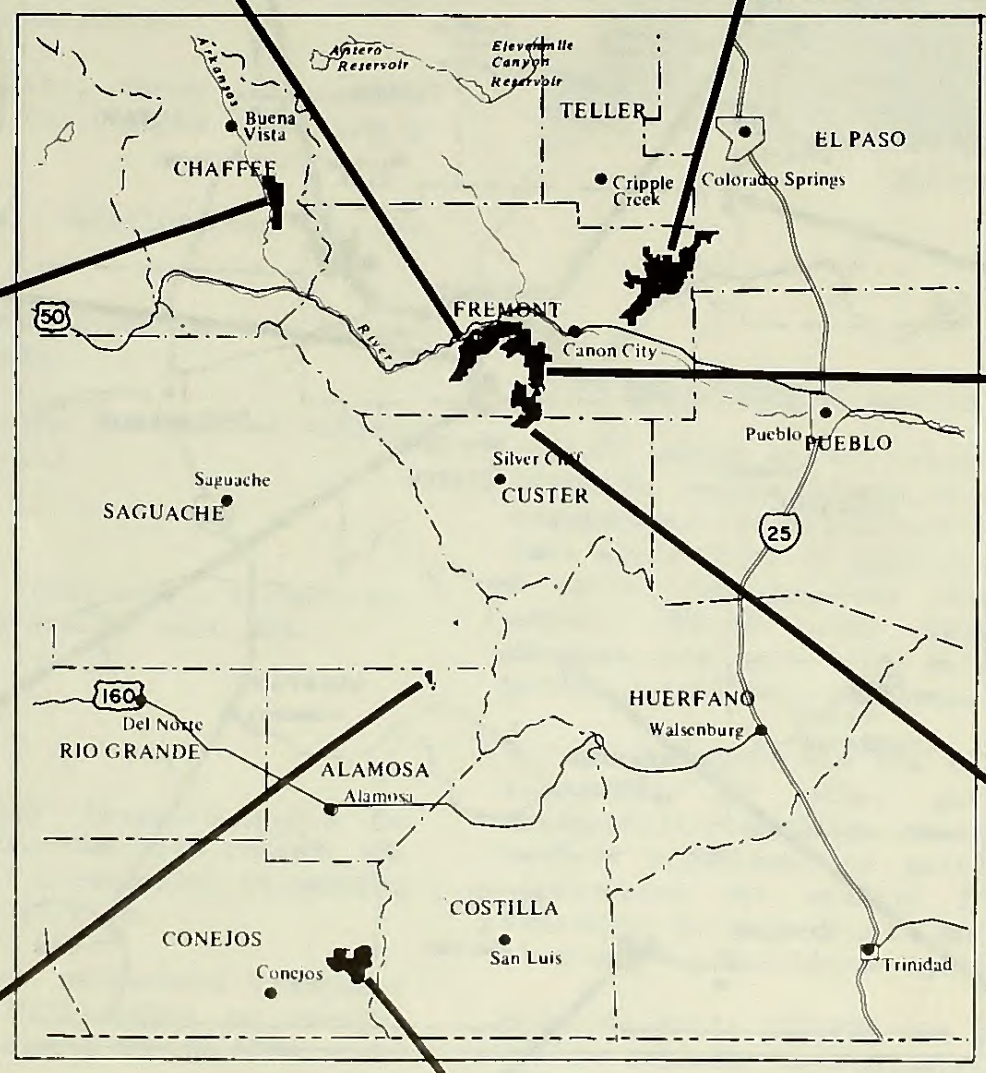


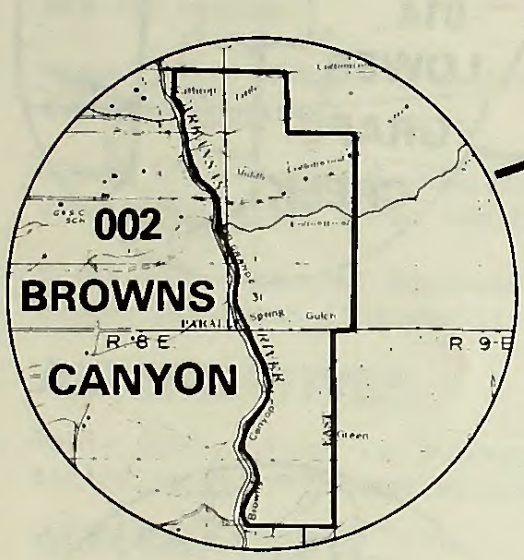
MAP II - 2 ALTERNATIVE C - PARTIAL WILDERNESS DESIGNATION - I

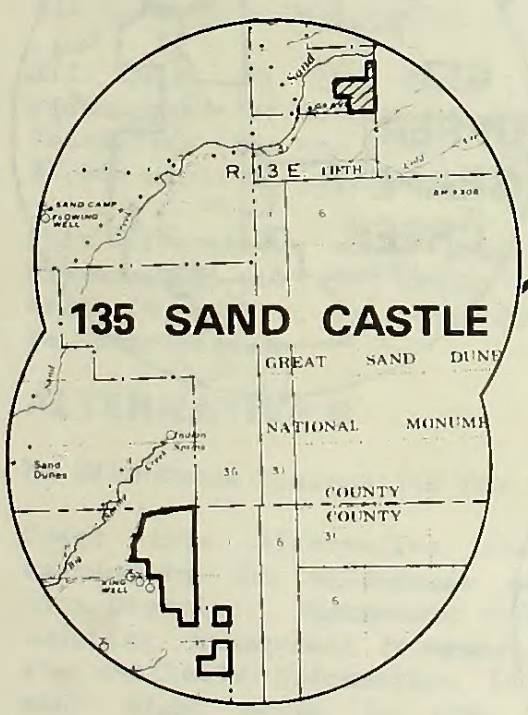
PORTIONS DELETED FROM WILDERNESS RECOMMENDATIONS

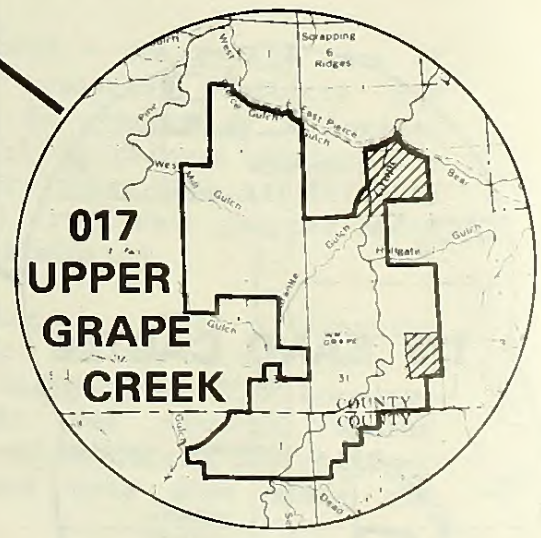






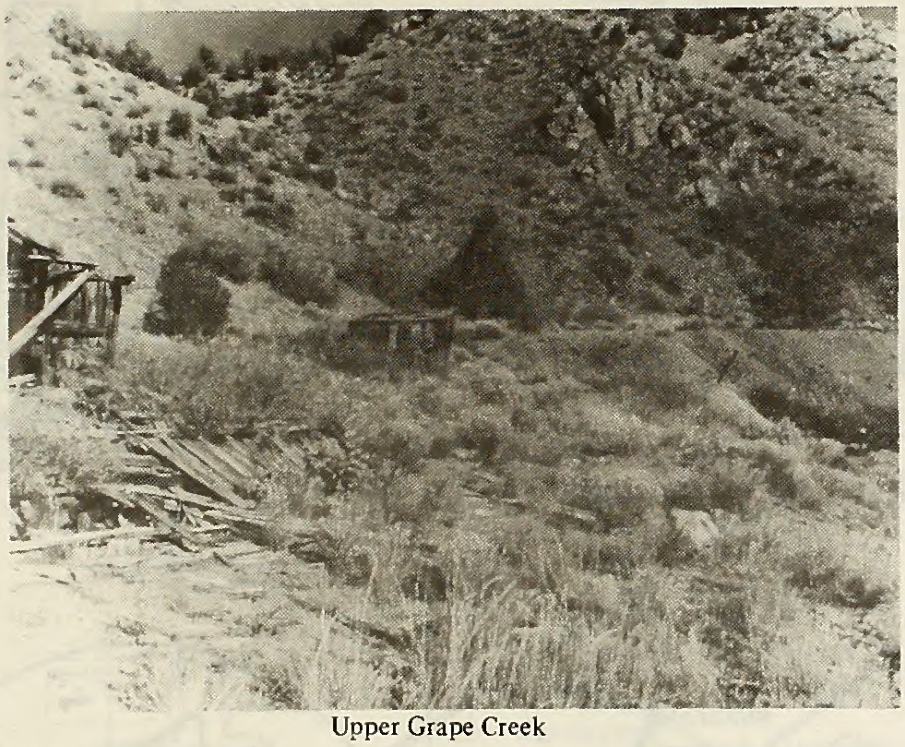






Lower Grape Creek (11,220 WSA acres) - This alternative has two boundary adjustments and includes approximately 7,300 acres to be recommended for wilderness designation. The first adjustment omits Horseshoe Mountain with the boundary beginning at the Tights and extending up the unnamed drainage to Marsh Gulch. This would omit two peripheral patented mining claims eliminating this resource conflict. The other adjustment omits the land west of Goat Park Gulch because of the cumulative impact of past mining operations.

Beaver Creek (26,150 WSA acres) - This alternative makes four boundary adjustments which would leave 20,750 acres to be recommended for wilderness designation. From Holbert drainage south, the boundary would be withdrawn to the ridgetop paralleling Phantom Canyon and omitting 250 acres. This would eliminate the resource conflict between wilderness and back-country vehicle use and camping along Eightmile Creek. Other adjustments exclude 1,750 acres west of the East Fork of Eightmile Creek and north of the powerplant along the West Fork of Beaver Creek (1,000 acres). In addition the northeast 2,400 acres beginning at the narrow extension near the East Fork of Turkey Creek would be omitted. These boundary adjustments would omit three narrow extensions and result in a more manageable unit.



Upper Grape Creek

Upper Grape Creek (10,200 WSA acres) - The boundary was adjusted to exclude approximately 360 acres in the northeast corner along Grape Creek. Omitting this narrow arm would result in a more concentrated and manageable unit and exclude an area that would be difficult to manage because of back-country vehicle use. The other 240 acres exclude patented mining lands along the eastern boundary eliminating this resource conflict. The size of the unit in this alternative would be approximately 9,600 acres.

Sand Castle (1,644 WSA acres) - This WSA is contiguous with the Great Sand Dunes Wilderness Area. One 160-acre parcel of the unit is located approximately 7 miles from the majority of the unit. This alternative would omit this isolated parcel since its distance from the rest of the unit would make wilderness management difficult. Under this alternative 1,484 acres would be recommended for wilderness designation.

San Luis Hills (10,240 WSA acres) - This alternative makes three boundary changes, leaving approximately 7,440 acres to be recommended for wilderness designation. The current southeastern boundary follows the legal land status and is difficult to find on the

Lower Grape Creek

ground. The alternate boundary would be withdrawn to the beginning of the hills omitting approximately 1,360 acres. The northern boundary would be adjusted to exclude approximately 1,440 acres which have possible mineral potential and some mineral exploration pits. This boundary adjustment also excludes a state section inholding. These changes would improve manageability and eliminate a resource conflict.

ALTERNATIVE D

Partial Wilderness Designation - II

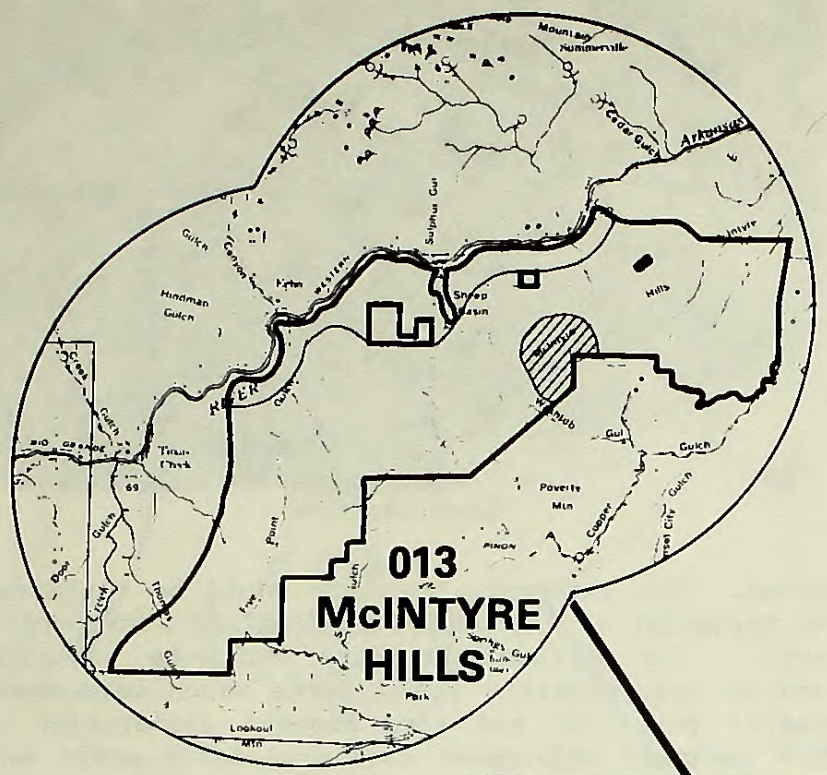
As in Alternative C, this alternative also considers partial areas of the WSAs for wilderness designation (see Map II-3). The Beaver Creek WSA is the only unit in which a second boundary adjustment would logically resolve additional conflicts.

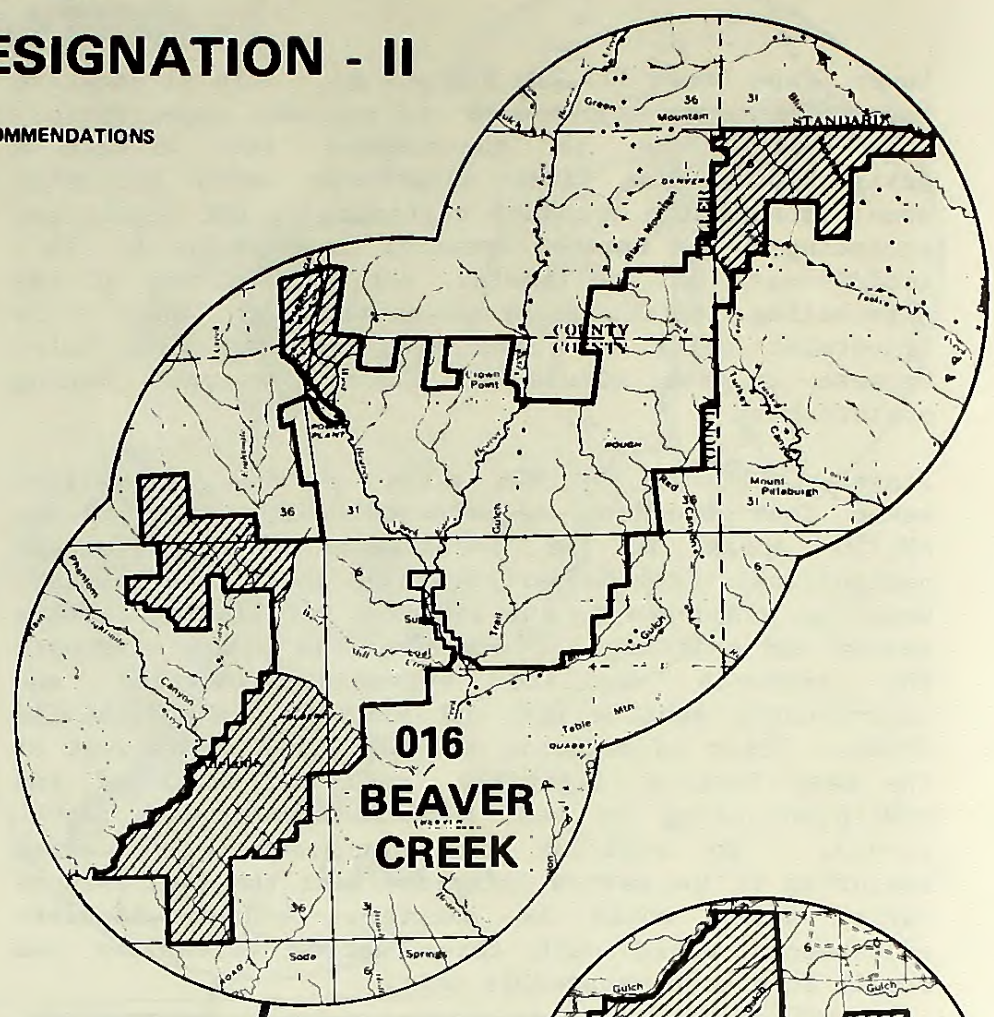
Beaver Creek (26,150 WSA acres) - This alternative would include approximately 17,000 acres to be recommended for wilderness designation. This boundary would exclude everything southwest of Holbert drainage and parallel to Phantom Canyon (approximately 4,000 acres). This differs from the boundary adjustment in Alternative C which omits 250 acres and some back-country vehicle and camping use. This alternative includes the 250 acres omitted in Alternative C and also omits an additional 3,750 acres which have some timber harvest potential, therefore, eliminating resource conflicts with both recreation and forestry resources.

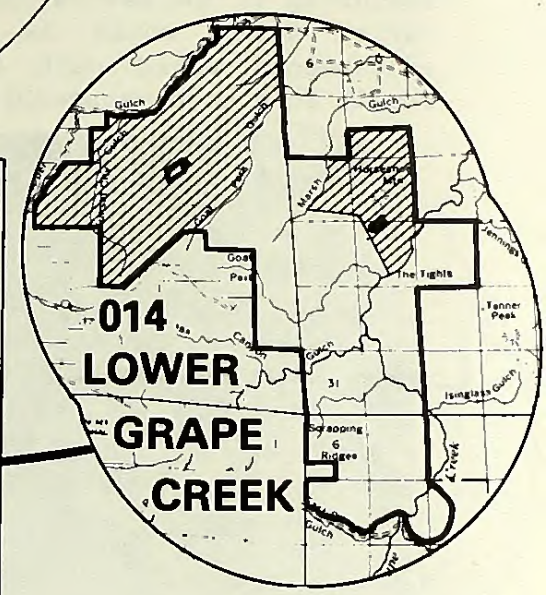
The other boundary changes are the same as those discussed in Alternative C. These other adjustments exclude 1,750 acres west of the East Fork of Eightmile Creek and 1,000 acres north of the powerplant along the West Fork of Beaver Creek. In addition the northeast 2,400 acres beginning at the narrow extension near the East Fork of Turkey Creek would be omitted. These boundary adjustments would omit three narrow extensions and result in a more manageable unit.

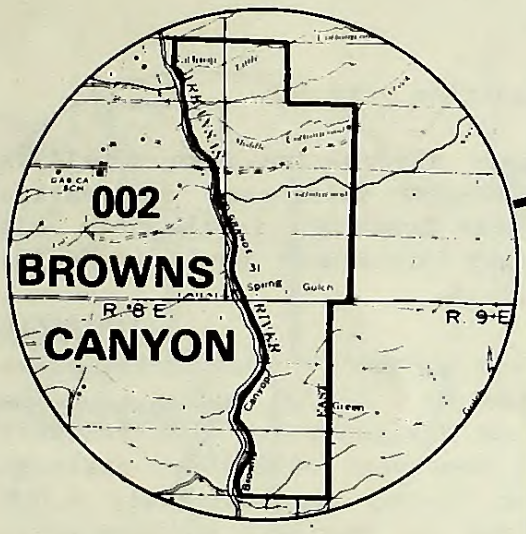
MAP II - 3 ALTERNATIVE D - PARTIAL WILDERNESS DESIGNATION - II

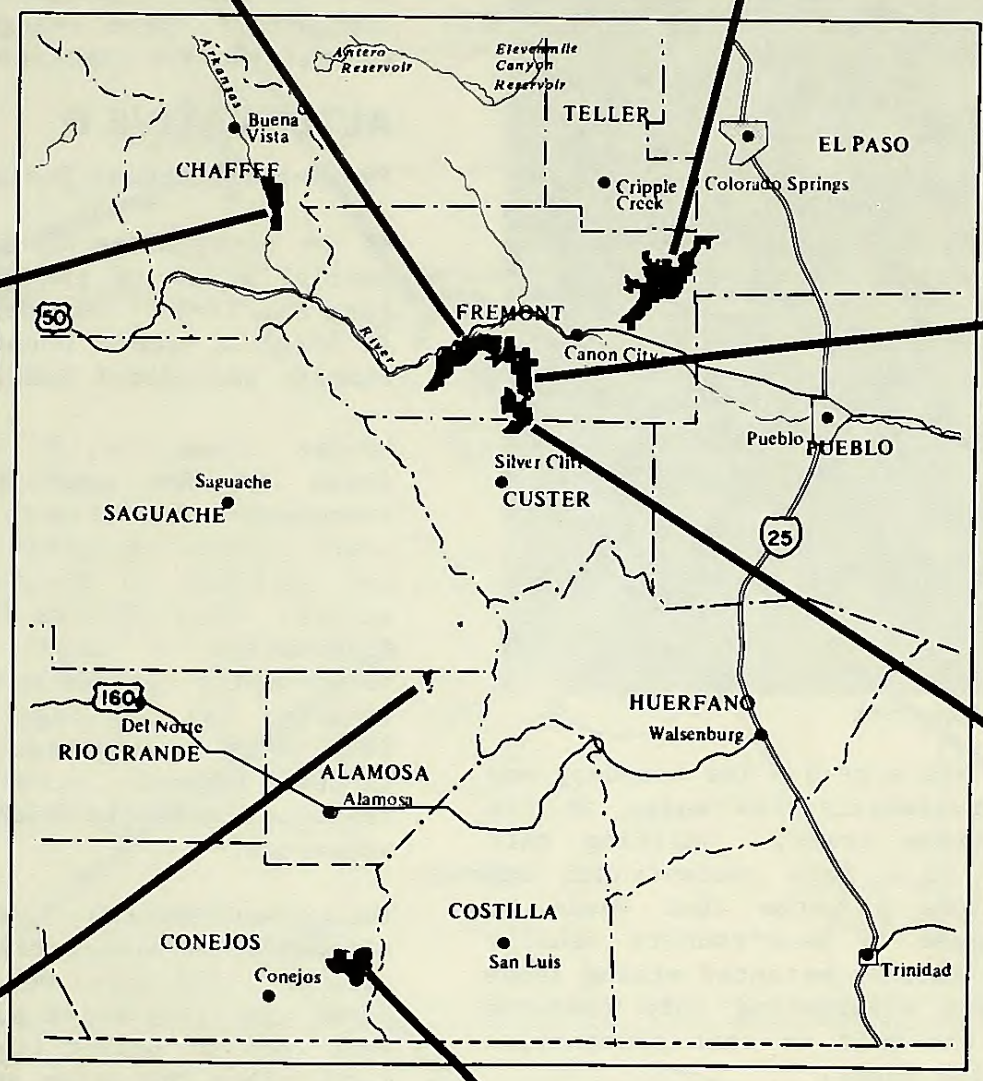
PORTIONS DELETED FROM WILDERNESS RECOMMENDATIONS

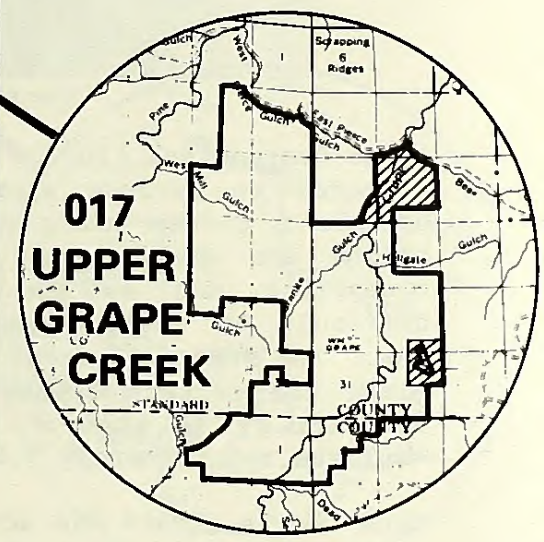


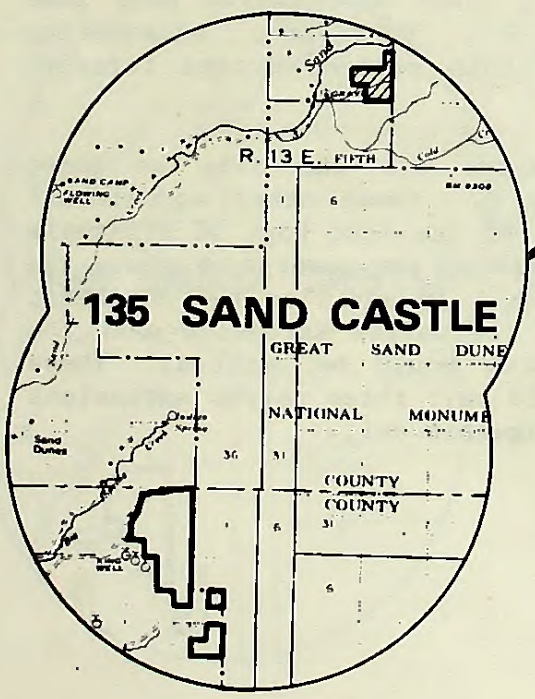


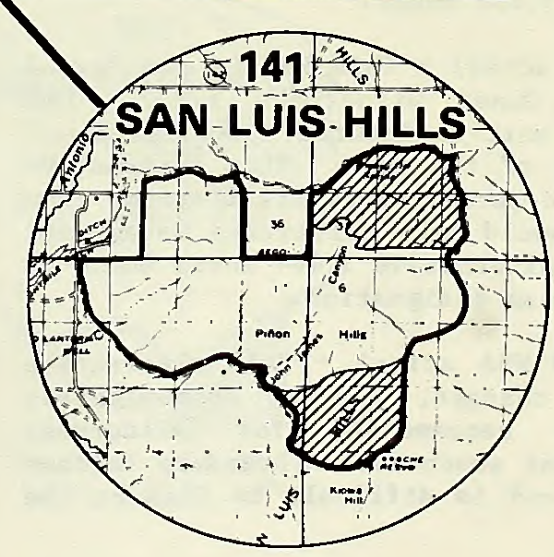






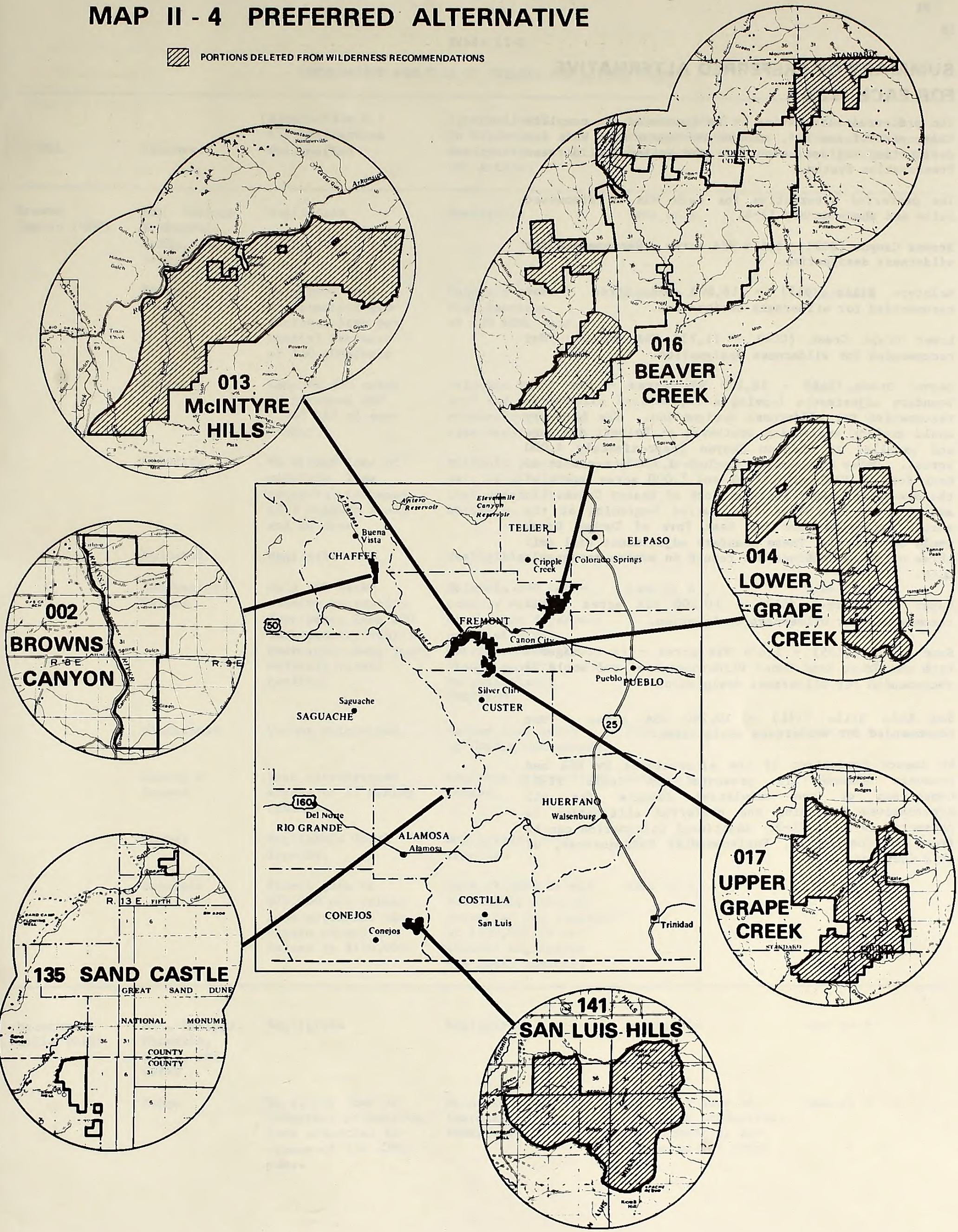






MAP II - 4 PREFERRED ALTERNATIVE

PORTIONS DELETED FROM WILDERNESS RECOMMENDATIONS



SUMMARY OF PREFERRED ALTERNATIVE FOR EACH WSA

The preferred alternative is to recommend two complete WSAs, part of one WSA, and not recommend four WSAs for designation and inclusion into the National Wilderness Preservation System.

The preferred alternative for each WSA is discussed below and shown on Map II-4.

Browns Canyon (002) - 6,614 WSA acres - Recommended for wilderness designation.

McIntyre Hills (013) - 16,800 WSA acres - Not recommended for wilderness designation.

Lower Grape Creek (014) - 11,220 WSA acres - Not recommended for wilderness designation.

Beaver Creek (014) - 26,150 WSA acres - Has four boundary adjustments leaving a 17,000-acre unit to be recommended for wilderness designation. The boundary would exclude everything southwest of Holbert drainage and parallel to Phantom Canyon (approximately 4,000 acres). Other adjustments exclude 1,750 acres west of East Fork of Eightmile Creek and 1,000 acres north of the powerplant along the West Fork of Beaver Creek. In addition the northeast 2,400 acres beginning at the narrow extension near the East Fork of Turkey Creek would be omitted. These boundary adjustments will omit three narrow extensions and result in a more manageable unit.

Upper Grape Creek (017) - 10,200 WSA acres - Not recommended for wilderness designation.

Sand Castle (135) - 1,644 WSA acres - Is contiguous with the Great Sand Dunes Wilderness Area and would be recommended for wilderness designation

San Luis Hills (141) - 10,240 WSA acres - Not recommended for wilderness designation.

An impact comparison of the alternatives by WSA and resource element is presented in Table II-2. Comparison of the cumulative impacts for all alternatives including the preferred alternative is presented in Table II-3. Additional information can be found in Chapter IV, Environmental Consequences, of this document.

Table II-2

COMPARATIVE ANALYSIS OF IMPACTS FOR ALTERNATIVES

WSA	Resource	Alternative A - All Wilderness Designation	Alternative B - No Wilderness Designation (No Action)	Alternative C - Partial Wilderness Designation - I	Alternative D - Partial Wilderness Designation - II
Browns Canyon (002)	Air, Geology & Minerals, Soils, and Water	Negligible	Negligible	Same as A	Same as A
	Range	No direct loss of livestock production, lose potential increase of 150 AUMs/year	Maintain potential increase of 150 AUMs/year	Same as A	Same as A
	Forestry	Lose 89,930 cords of firewood and 1,560 Mbf of sawtimber.	Maintain firewood and sawtimber production lost in Alternative A.	Same as A	Same as A
	Wildlife	No direct loss of wildlife, lose potential increase of 5 bighorn sheep and 20 deer.	Maintain potential gain of wildlife lost under Alternative A.	Same as A	Same as A
	Cultural	Negligible	Negligible	Same as A	Same as A
	Recreation/ Visual	Gain 100 back-country recreation days/year; lose 100 back-country vehicle recreation days/year; maintain visual quality.	Maintain 100 back-country vehicle recreation days/year north of Middle Cottonwood Creek. Visual quality could be potentially degraded.	Same as A	Same as A
	Wilderness	Values maintained.	Values lost north of Middle Cottonwood.	Same as A	Same as A
	Realty & Access	Lose unrestricted access to 17 mining claims.	Continue unrestricted access.	Same as A	Same as A
	Social	Negligible local impacts.	Negligible local impacts.	Same as A	Same as A
	Economic	Direct gain of $72,000 net value; lose potential increase of net values by $150,000.	Lose $72,000 direct net value; maintain potential for increase of $150,000 in net values; negligible and local impacts.	Same as A	Same as A
McIntyre Hills (013)	Air, Geology Minerals, Soils, and Water	Negligible	Negligible	Negligible	Same as A
	Range	No direct loss of livestock production, lose potential increase of 120 AUMs/year.	Maintain potential increase of 120 AUMs/year.	No direct loss of livestock production; lose potential increase of 106 AUMs/year.	Same as C

COMPARATIVE ANALYSIS OF IMPACTS FOR ALTERNATIVES

WSA	Resource	Alternative A - All Wilderness Designation	Alternative B - No Wilderness Designation (No Action)	Alternative C - Partial Wilderness Designation - I	Alternative D - Partial Wilderness Designation - II
	Forestry	Lose 27,370 cords of firewood and 5,332 Mbf of sawtimber.	Maintain firewood and sawtimber production lost in Alternative A.	Lose 12,238 cords of firewood and 4,810 Mbf of sawtimber.	Same as C
	Wildlife	No direct loss of wildlife; lose potential increase of 140 mule deer, 15 bighorn sheep and 50 turkey.	Maintain potential increase of wildlife lost under Alternative A.	No direct loss of wildlife, lose potential increase of 115 mule deer and 40 turkey.	Same as C
	Cultural	Negligible	Negligible	Negligible	Same as C
	Recreation/ Visual	Gain 60 back-country recreation days/year, lose 15 big game hunter days/year, maintain visual quality.	Maintain recreation days lost under Alternative A. Unknown potential to degrade visual quality.	Gain 60 back-country recreation days/year, lose 3 big game hunter days/year, maintain majority of visual quality.	Same as C
	Wilderness	Maintain values.	Lose values; would be semiprimitive motorized.	Lose 640 acres of wilderness values.	Same as C
	Realty & Access	Lose unrestricted access to 410 acres of non-Federal inholdings and 85 mining claims.	Continue unrestricted access.	Negligible	Same as C
	Social	Negligible local impacts.	Negligible local impacts.	Negligible local impact.	Same as C
	Economic	Direct gain of $50,000 net value, lose potential increase of net values by $240,000.	Direct net value, maintain potential increase of $240,000 in net values.	Direct gain of $50,000 in net value, lose the potential increase of net values by $171,000.	Same as C
Lower Grape Creek (014)	Air	Negligible	Negligible	Negligible	Same as C
	Geology & Minerals	Restrictive development of base and precious metals.	Usual development standards	Negligible	Same as C
	Soils & Water	Negligible	Negligible	Negligible	Same as C
	Range	No direct loss of livestock production, lose potential increase of 190 AUMs/year.	Maintain potential increase of 190 AUMs/year.	No direct loss of livestock production, lose potential increase of 157 AUMs/year.	Same as C
	Forestry	Lose 43,930 cords of firewood and 8,588 Mbf of sawtimber.	Maintain firewood and sawtimber production lost in Alternative A.	Lose 32,430 cords of firewood and 6,292 Mbf of sawtimber.	Same as C

COMPARATIVE ANALYSIS OF IMPACTS FOR ALTERNATIVES

WSA	Resource	Alternative A - All Wilderness Designation	Alternative B - No Wilderness Designation (No Action)	Alternative C - Partial Wilderness Designation - I	Alternative D - Partial Wilderness Designation - II
	Wildlife	Convert 10 pounds/ acre of game fish to nongame, lose potential increase of 170 mule deer, 40 turkey, and game fish of 50 pounds/acre.	Maintain 10 pounds/ acre of game fish and potential increase of wildlife under Alternative A.	Lose 10 pounds/acre of game fish to nongame. Lose potential increase of 90 mule deer, 40 turkey and game fish of 50 pounds/ acre.	Same as C
	Cultural	Negligible	Negligible	Negligible	Same as C
	Recreation/ Visual	Gain 110 back-country recreation days/year; lose 120 back-country vehicle recreation days/year; lose potential increase of back-country vehicle use by 133 and fishing by 20 recreation days. Maintain visual quality.	Increase 40 fishing recreation days and maintain recreation days lost under Alternative A. Visual quality could be potentially degraded.	Gain 110 back-country recreation days/year, lose 85 back-country recreation days/year, lose potential increase of recreation days under Alternative A; maintain most visual quality.	Same as C
	Wilderness	Maintain values.	Lose some values.	Maintain values.	Same as C
	Realty & Access	Lose unrestricted access to 75 acres of non-Federal inholdings and 67 mining claims.	Continue unrestricted access.	Lose unrestricted access to 53 existing valid mining claims.	Same as C
	Social	Negligible local impacts.	Negligible local impacts.	Negligible local impacts.	Same as C
	Economic	Direct gains of $50,000 net value, lose potential increase of net values by $275,000.	Lose $50,000 in direct net value, maintain potential for increasing net value by $275,000.	Direct gain of $50,000 in net value, lose potential for increasing net values by $154,000.	Same as C
Beaver Creek (016)	Air, Geology & Minerals, Soils and Water	Negligible	Negligible	Negligible	Negligible
	Range	None	None	None	None
	Forestry	Lose 75,670 cords of firewood and 4,044 Mbf of sawtimber.	Maintain all firewood and sawtimber production lost in Alternative A.	Lose all firewood and sawtimber production in Alternative A.	Lose 1,274 Mbf of sawtimber.
	Wildlife	No direct loss of wildlife, lose potential increase of 50 mule deer and 100 turkey.	Maintain potential to increase wildlife under Alternative A.	Same as Alternative A.	None

COMPARATIVE ANALYSIS OF IMPACTS FOR ALTERNATIVES

WSA	Resource	Alternative A - All Wilderness Designation	Alternative B - No Wilderness Designation (No Action)	Alternative C - Partial Wilderness Designation - I	Alternative D - Partial Wilderness Designation - II
	Cultural	Negligible	Negligible	Negligible	Negligible
	Recreation/ Visual	Gain 840 back-country recreation days/year; lose 1,188 back-country vehicle recreation days/year. Visual quality maintained.	Maintain 1,188 back-country vehicle recreation days/year; visual quality could be potentially degraded.	Same as Alternative A, except most visual quality maintained.	Gain 840 back-country recreation days/year; lose back-country vehicle recreation days/year. Most visual quality maintained.
	Wilderness	Maintain values.	Lose values in some areas.	Maintain most values; increased manageability over Alternative A.	Values lost in some areas excluded. Same manageability as Alternative C.
	Realty & Access	Lose unrestricted access to 2 mining claims.	Continue unrestricted access.	Same as Alternative A.	Same as Alternative A.
	Social	Negligible local impacts.	Negligible local impacts.	Negligible local impacts.	Negligible local impacts.
	Economic	Direct gain of $525,000 net value; loss of $150,000 net value.	Lose $525,000 net value; maintain $150,000 net value.	Direct gain of $525,000 net value; loss of $32,000 net value.	Direct gain of $525,000 net value; loss of $15,000 net value.
Upper Grape Creek (017)	Air, Geology & Minerals, Soils and Water	Negligible	Negligible	Negligible	Negligible
	Range	No direct loss of livestock production; lose potential increase of 195 AUMs/ year.	Maintain potential increase of 195 AUMs/year.	Same as Alternative A.	Same as A
	Forestry	Lose 21,206 cords of firewood and 22,066 Mbf of sawtimber.	Maintain firewood and sawtimber production loss shown in Alternative A.	Same as Alternative A.	Same as A
	Wildlife	Convert 10 pounds/ acre of game fish to nongame. Lose potential increase of 175 mule deer, 100 turkey, and game fish by 50 pounds/acre.	Maintain game fish and potential increase lost under Alternative A.	Same as Alternative A.	Same as A
	Cultural	Negligible	Negligible	Negligible	Same as C
	Recreation/ Visual	Gain 110 back-country recreation days/year; lose 120 back-country vehicle days/year; lose potential increase of back-country vehicle use by 133 and fishing by 20 recreation days/ year. Maintain visual quality.	Maintain 120 back-country recreation days/year; maintain potential increase of back-country vehicle use and fishery. Visual quality could be potentially degraded.	Gain 110 back-country recreation days/year; lose 53 back-country vehicle recreation days/year; lose potential increase of recreation days under Alternative A. Maintain most visual quality.	Same as C

COMPARATIVE ANALYSIS OF IMPACTS FOR ALTERNATIVES

WSA	Resource	Alternative A - All Wilderness Designation	Alternative B - No Wilderness Designation (No Action)	Alternative C - Partial Wilderness Designation - I	Alternative D - Partial Wilderness Designation - II
	Wilderness	Maintain values.	Lose values on approximately 19% of the unit.	Maintain values except for a very small area.	Same as C
	Realty & Access	Lose unrestricted access to 30 acres of non-Federal inholdings and 148 mining claims.	Continue unrestricted access.	Lose unrestricted access to 1 existing valid mining claim.	Same as C
	Social	Negligible local impacts.	Negligible local impacts.	Negligible local impacts.	Same as C
	Economic	Direct gain of $50,000 net value, lose potential increase of net values by $275,000.	Lose $50,000 net value, maintain potential increase of net values by $275,000.	Direct gain of $50,000 net value, lose potential increase in net values by $264,000.	Same as C
Sand Castle (135)	Air, Geology & Minerals, Soils and Water	Negligible	Negligible	Negligible	Same as C
	Range, Forestry and Wildlife	None	None	Negligible	Same as C
	Cultural	Negligible	Negligible	Negligible	Same as C
	Recreation/ Visual	Gain 15 back-country recreation days/year. Lose 15 back-country vehicle days/year. Maintain visual quality.	Maintain 15 back-country vehicle recreation days/ year. Minimal deterioration of visual quality expected.	Same as Alternative A.	Same as A
	Wilderness	Maintain and enhance Great Sand Dunes Wilderness Area.	Lose value on approximately 20% of the area.	Same as Alternative A.	Same as A
	Realty & Access	None	None	None	Same as C
	Social	Negligible local impacts.	Negligible local impacts.	Same as Alternative A.	Same as A
	Economic	Direct gain of $20,000 net value, lose potential increase of net value by $5,000.	Lose $20,000 net value, maintain potential increase of net value by $5,000.	Same as Alternative A.	Same as A

COMPARATIVE ANALYSIS OF IMPACTS FOR ALTERNATIVES

WSA	Resource	Alternative A - All Wilderness Designation	Alternative B - No Wilderness Designation (No Action)	Alternative C - Partial Wilderness Designation - I	Alternative D - Partial Wilderness Designation - II
San Luis Hills (141)	Air	Negligible	Negligible	Negligible	Same as C
	Geology & Minerals	Restrictive development of base and precious metals.	Usual development standards.	Exclude highest potential mineral areas.	Same as C
	Soils and Water	Negligible	Negligible	Negligible	Same as C
	Range and Forestry	None	None	None	Same as C
	Wildlife	Lose potential to increase mule deer populations.	Maintain potential increase of mule deer.	Same as Alternative A.	Same as A
	Cultural	Negligible	Negligible	Negligible	Same as C
	Recreation/ Visual	Gain 50 back-country recreation days/year, lose 75 back-country vehicle recreation days/year. Visual quality maintained.	Maintain 75 back-country vehicle recreation days/ year. Visual quality could be potentially degraded.	Same as Alternative A, except visual quality mostly maintained.	Same as C
	Wilderness	Maintain values.	Lose some values.	Maintain values in part of the area.	Same as C
	Realty/ Access	Lose unrestricted access to 640 acres of non-Federal inholdings and 85 mining claims.	Continue unrestricted access.	Continue unrestricted access in some areas.	Same as C
	Social	Negligible local impacts.	Negligible local impacts.	Negligible local impacts.	Same as C
	Economic	Gain $55,000 net value, lose net value of $85,000.	Lose $55,000 net value; gain $85,000 in net value.	Same as Alternative A.	Same as C

Table II-3

COMPARATIVE ANALYSIS OF CUMULATIVE IMPACTS OF ALTERNATIVES

Resource	Alternative A - All Wilderness Designation	Alternative B - No Wilderness Designation (No Action)	Alternative C - Partial Wilderness Designation - I	Alternative D - Partial Wilderness Designation - II	Preferred Alternative
Air	Negligible impacts in all WSAs.	Negligible impacts in all WSAs.	Negligible impacts in all WSAs.	Negligible impacts in all WSAs.	Negligible impacts in all WSAs.
Geology & Minerals	Negligible impacts in 5 WSAs, adversely impacted in 2 other WSAs losing unrestrictive access and development of base and precious metals.	Unrestrictive access and development of base and precious metals under guidance provided in the MFP.	Negligible impacts in 6 WSAs, no impacts in 1 WSA due to the partial designation excluding the highly mineralized zone for base and precious metals.	Negligible impacts in 6 WSAs, no impacts in 1 WSA due to the partial designation excluding the the highly mineralized zone for base and precious metals.	Lose unrestricted access for development of base and precious metals in 3 WSAs.
Soils and Water	Negligible impacts in all WSAs.	Negligible impacts in all WSAs.	Negligible impacts in all WSAs.	Negligible impacts in all WSAs.	Negligile impacts in all WSAs.
Range	Lose potential increase of 655 AUMs/year in all WSAs.	Maintain potential increase of 655 AUMs year.	Lose potential increase of 608 AUMs/year in 6 WSAs.	Lose potential increase of 608 AUMs/year in 6 WSAs.	Lose potential increase of 150 AUMs/year.
Forestry	Lose 259,106 cords of firewood and 41,560 Mbf of sawtimber.	Maintain 259,106 cords of firewood and 41,590 Mbf of sawtimber.	Lose 231,474 cords of firewood and 36,002 Mbf of sawtimber.	Lose 155,804 cords of firewood and 36,002 Mbf of sawtimber.	Lose 89,930 cords of firewood and 2,834 Mbf of sawtimber in 3 WSAs.
Wildlife	Lose potential increase of 555 mule deer, 20 bighorn sheep, 290 turkey, annual game fish production by 100 pounds, and convert annually 20 pounds of game fish to nongame fish.	Maintain the potential increase of 555 mule deer, 20 bighorn sheep, 290 turkey, annual game fish production of 100 pounds, and not convert 20 pounds of game fish to nongame fish.	Lose potential increase of 450 mule deer, 280 turkey, annual game fish production by 100 pounds, and convert annually 20 pounds of game fish to nongame fish.	Lose potential increase of 450 mule deer and 280 turkey, annual game fish production by 100 pounds, and convert annually 20 pounds of game fish to non game fish.	Losing potential increase of 70 mule deer, 5 bighorn sheep, and 100 turkey.
Recreation	Lose 17 recreation days/year.	Gain or potentially gain 17 recreation days/year.	Lose 234 recreation days/year.	Lose 234 recreation days/year.	Gain or potentially gain 867 recreation days/year.

COMPARATIVE ANALYSIS OF CUMULATIVE IMPACTS OF ALTERNATIVES

Resource	Alternative A - All Wilderness Designation	Alternative B - No Wilderness Designation (No Action)	Alternative C - Partial Wilderness Designation - I	Alternative D - Partial Wilderness Designation - II	Preferred Alternative
Visual	Maintain visual quality in all WSAs.	Visual quality could be potentially degraded to different degrees in the various WSAs.	Maintain most of the visual quality in the various units.	Maintain most of the visual quality in the various units.	Maintain visual quality in 3 WSAs while visual quality could be potentially degraded in 4 WSAs.
Cultural	Negligible impacts in all WSAs.	Negligible impacts in all WSAs.	Negligible impacts in all WSAs.	Negligible impacts in all WSAs.	Negligible impacts in all WSAs.
Wilderness	Maintain values in all WSAs.	Lose values to different degrees in the various WSAs.	Maintain most of the values in the WSAs.	Maintain most of the values in the WSAs.	Lose some values in WSAs not recommended.
Realty/Access	Lose unrestrictive access to 1,145 acres of non-Federal inholdings and 404 mining claims.	Maintain unrestrictive access to 745 acres of non-Federal inholdings and 375 mining claims.	Lose unrestrictive access to 640 acres of non-Federal inholdings and 54 mining claims.	Lose unrestrictive access to 640 acres of non-Federal inholdings and 54 mining claims.	Lose unrestrictive access to 11 mining claims.
Social	Negligible impacts in in all WSAs.	Negligible impacts in all WSAs.	Negligible impacts in all WSAs.	Negligible impacts in all WSAs.	Negligible impacts in all WSAs.
Economic	Make direct gains of $822,000; lose potential net values increase of $1,180,000.	Lose direct gains of $822,000; potential net value increases of $1,180,000 could be realized.	Make direct gain of $827,000; lose potential net value increase of $861,000.	Make direct gains of $827,000; lose potential net value increases of $844,000.	Make direct gains of $617,000; lose potential net value increase of $170,000.

CHAPTER III - AFFECTED ENVIRONMENT

This chapter will briefly describe the environment of the areas to be affected by the actions under consideration. The environment described in this chapter includes the 82,000+ acres in the seven WSAs in the Canon City District. Non-Federal lands, i.e. state and private land inholdings, are included in this discussion.

The affected environment will be described in three sections: 1) general description of the affected environment; 2) relationships to other Federal, state, and local actions and programs; and 3) unit by unit description of the environment (all resource values affected will be described in each WSA).

GENERAL SECTION

Wilderness - The majority of the existing wilderness areas located in the contiguous United States is found within the mountainous portions of the western United States. As identified by the Baily-Kuchler Ecosystem map of ecoregions in the United States, the wilderness areas are primarily located in the Pacific, Sierran, or the Rocky Mountain Forest Province. The WSAs contain some dominant physical and biological characteristics which can be integrated and classified into regional land units called ecosystems. These systems and landforms will be considered, as will the other considerations in the wilderness resource portions of this chapter. The classification of ecosystems is based on an integration of the natural factors of climate, vegetation, soils, and landforms. Wilderness designation presents an opportuntity to preserve, in an unimpaired condition for future generations, examples of the basic ecosystems and landforms present in the United States. Although there are many varied land classification systems available, BLM has selected the Baily-Kuchler Ecosystems of the United States system. (See Baily, Robert G., 1976, Ecoregions of the United States, USDA, U.S. Forest Service and Kuchler, A.W., 1966, Potential Natural Vegetation of the United States, USDI, Geological Survey.) The Baily-Kuchler system was selected because it is a land classification system which facilitates planning at the national level. In addition, it provides a broad synthesis of current knowledge about the ecosystem geography of the country. It also serves as a useful reference for those who desire an overview on a comparative basis for ecosystem and land form representation in existing and potential National Wilderness Preservation System (NWPS) units. All the WSAs considered in this document are in the pine Douglas-fir forest (approximately 64,830 acres), western spruce fir forest (6,000 acres), saltbrush greasewood (1,000 acres), or fescue mountain muhly prairie (10,375 acres) vegetative classification of the Rocky Mountain Forest Province. In addition to Colorado, this province extends into the following states; Wyoming, Utah, Montana, Idaho, Oregon, Washington, and New Mexico. In Colorado, almost half the state is considered in the Rocky Mountain Forest Province. (For more detailed information on ecoregions and vegetative classifications, please refer to the MSA.)

The MSA has addressed diversity in the National Wilderness Preservation System in detail. See Appendix B and D in the MSA for summary charts showing this diversity. Charts in Appendix B include 1) expanding the diversity of natural systems and features as represented by ecosystems and landforms and 2) expanding the opportunities for solitude or primitive recreation within 1 day of driving time (5 hours) of major population centers. Appendix D shows all areas either already designated or recommended to Congress as wilderness within both the state and the surrounding region.

Recreation - Use statistics were derived from observations by BLM personnel, from information submitted by organizations and individuals, and/or from partial samplings taken in the past. Many of the figures were taken from planning documents.

Social - The WSAs and their users are a small element of the social picture in the various counties. The majority of comments received simply states a preference for or against wilderness designation, however, some provided more information concerning specific units. A summary of the more detailed comments is included in the social section of the following units: Lower Grape Creek (014), Beaver Creek (016), and San Luis Hills (141).

Comments received concerning the remaining WSAs were primarily of a general nature and are not addressed specifically by unit. They have been summarized in the MSA and are on file in the Canon City District Office.

RELATIONSHIPS TO OTHER ACTIONS/PROGRAMS

The seven wilderness study areas are located in the following eight counties. (See Map I-1.)

Alamosa - A portion of Sand Castle (135) which is adjacent to the Great Sand Dunes National Monument and Wilderness.

Chaffee - Browns Canyon (002).

Conejos - San Luis Hills (141).

Custer - A portion of Upper Grape Creek (017).

El Paso - A portion of Beaver Creek (016).

Fremont - McIntyre Hills (013), Lower Grape Creek (014), and portions of Beaver Creek (016) and Upper Grape Creek (017).

Saguache - A portion of Sand Castle (135) which is adjacent to the Great Sand Dunes National Monument and Wilderness.

Teller - A portion of Beaver Creek (016).

All of these counties have plans, policies, or programs with goals and objectives that provide both support and opposition for wilderness designation. Alamosa and Conejos Counties have specifically addressed wilderness, and Chaffee and Fremont Counties contain related statements. Refer to Chapter IV and Appendix E.

In addition to the counties, three entities have addressed wilderness. The city of Colorado Springs objects to the possible designation of Beaver Creek (016) for several reasons (see Appendix E). Most of the Great Sand Dunes National Monument is designated wilderness and its plans, policies, and programs are in

accord with such designation. The State of Colorado 1981 Outdoor Recreation Plan recommends that BLM continue to provide dispersed recreation and report on suitability of areas as wilderness for congressional designation. It also indicates that wilderness uses in the state, region 4 (Park, Teller, and El Paso), and region 13 (Lake, Chaffee, Fremont, and Custer) are highly needed. In region 8 (Saguache, Mineral, Rio Grande, Alamosa, Conejos, and Costilla) the need is medium. The U.S. Forest Service has land and resource management plans which include wilderness. There are five areas with wilderness characteristics located near the BLM study areas. They are: Collegiate Peaks Wilderness (12 miles northwest of Browns Canyon), Buffalo Peaks RARE II area (12 miles north of Browns Canyon), Sangre de Cristo (27 miles south of Browns Canyon, 10 miles southwest of McIntyre Hills and the Grape Creeks, and within 6 miles of Sand Castle), and South San Juan Wilderness (30 miles west of San Luis Hills).

UNIT BY UNIT DESCRIPTION OF ENVIRONMENT

The affected environment is described in each unit and by each affected resource value. The rationale is that each WSA should be described here and also analyzed later in Chapter IV on an individual basis to aid Congress in their study at a later date. This may cause some repetition of resource data presented.

BROWNS CANYON (002)

This unit contains 6,614 acres of land located approximately 6 miles south of Buena Vista and 7 miles northwest of Salida in Chaffee County. The WSA lies east of the Arkansas River in T. 51 N., R. 8 and 9 E., NMPM and T. 15 S., R. 77 and 78 W., 6th PM. (See Map III-1.)

Air

This unit is considered Class II by Federal Air Quality Standards. The Colorado State Air Pollution Control Commission has identified a large majority of this WSA as a zone of high air quality.

Geology and Minerals

The unit is located within the Upper Arkansas Valley which is a narrow, north tapering, sharply defined graben with a structural style similar to the Basin and Range Province. This graben is believed to be the northward extension of the Rio Grande Rift which extends from northern Mexico to central Colorado. Browns Canyon WSA is situated just off the eastern edge of the graben structure and the country rock is primarily a gneissic granodiorite and quartz monzonite.

The currently known resources in the WSA are minimal. However, many minerals have been identified as having some potential for existence. There were 17 recorded mining claims as of December 31, 1981. There are 6,614 acres of subsurface mineral in Federal ownership.

Critical Mineral Resource Values

The major mineral resource in the general area of the unit is fluorspar from the Browns Canyon District which has had a cumulative production in excess of $5 million. Ore reserve estimates in excess of 2 million tons have been delineated outside the WSA. The potential for the extension of significant amounts of fluorspar into the WSA is unlikely due to the presence of a northwest-southwest trending fault which separates the Browns Canyon District from the WSA.

Scattered throughout the unit are small pegmatitic dikes which are generally unzoned and consist mainly of quartz and feldspar with the following accessory minerals in limited quantities; beryl, columbium, tantalum, and mica. The primary interest in these pegmatites is for the accessory minerals, however, the small amount and only infrequent appearance of these minerals make them uneconomical.

The area has received some interest in the base and precious metal possibility with copper receiving the most interest. Copper production from the Sedalia Mine to the south of the unit was a major producer in the past, however, no discovery of an economic nature has been made within the unit. There has been some recent exploration interest in the area immediately south of the unit, but exploration results were not available. Available information provides no evidence of economic mineralization in the unit.

Energy Minerals

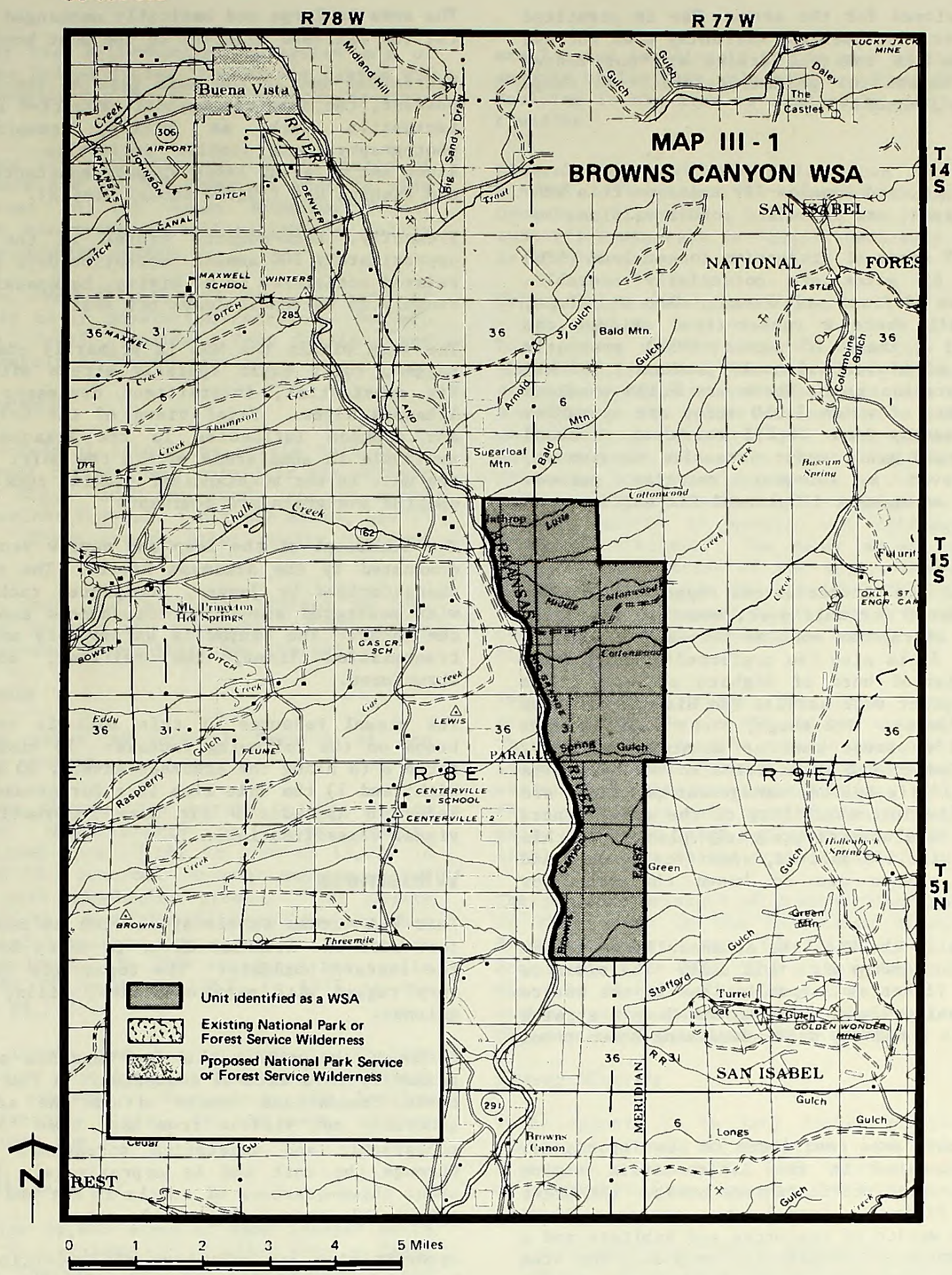
The WSA is included within the USGS designation of Prospectively Valuable for Geothermal Resources. The area is within the northern extension of the Rio Grande rift zone which has potential but is largely unexplored. There has been little exploration or leasing interest for geothermal within the WSA and little is expected. There appears to be no potential for oil and gas or coal.

Other Minerals

Minor amounts of placer gold have been removed from the gravels in the Arkansas River since 1859. The possible values of the deposits are not believed to be significant due to the limited quantity of suitable gravels within the unit. Vein gold has been mined from several areas around the WSA: Turrent, the Red, and the Sedalia Mine. Exploration within the WSA consists of several small exploration excavations but no value could be identified.

A quartzite deposit used for aggregate, roofing material, and decorative stone is situated on the easternmost boundary of the WSA between Secs. 18 and 19, T. 51 N., R. 9 E. This deposit has been worked in the past, however, the market is limited and does not represent a significant resource value.

Perlite, suitable for use as a lightweight aggregate, is found within the WSA in two locations. Little development has occurred on either of these sites due



to their moderate to small size. Additional exploration and testing of samples are needed to estimate minable tonnage.

Soils

There are two soil associations within this WSA. The majority of the unit belongs to the Rockland Rock outcrop association. The very western edge of the unit around Cottonwood and Middle Cottonwood Creek lies in the Dominson-San Isabel Association. Refer to Appendix B for more detail.

Water

This unit produces very little water. Several ephemeral drainages flow through the area, then empty into the Arkansas River. The headwaters are in the San Isabel National Forest, bordering the unit on the east. High intensity thunderstorms occasionally cause flooding in these drainages. The average annual sediment yield is low (less than 0.2 acre-foot per square mile) due in part to the large amount of rock outcrop in this area. Ground water is very scarce. It is possible that some of the alluvial deposits in the drainage bottoms would yield sufficient water for domestic or stock watering purposes.

Range

This WSA contains portions of two grazing allotments with approximately 65 animal unit months (AUMs). The area is considered marginal for livestock forage production but is ecologically stable. Primary range forage is mostly blue grama, Arizona fescue, and mountain muhly grasses. Allotment management plans

will not be developed for the area. Use is permitted in winter, however, the operator currently does not use the allotment as the railroad tracks are not fenced resulting in a hazard for grazing cattle. No range improvements are planned.

Forestry

Pinon pine, juniper, and Douglas-fir exist on this WSA. Other species present are aspen and ponderosa pine.

This unit has 479 acres of productive forest land (PFL) of which only 65 acres are potentially operable. (Operable can be defined as areas, due to slope, terrain, and soil where a rubber-tired skidder can safely operate.) These 65 acres (PFL) presently support 416 Mbf of timber and could produce 1,560 Mbf by the end of rotation age. There are 6,135 woodland acres in the unit, of which 3,910 acres are operable. These acres presently have 10,752 cords of firewood available and could grow, under intensive management, 89,930 cords over a 150-year rotation period. Intensive forest management is planned for this area.

Wildlife

This unit, due to its remoteness and rugged topography, is important habitat for mule deer, mountain lion, and several species of raptors such as red-tailed hawk and prairie falcon. It is also the preferred habitat for a recently transplanted herd of bighorn sheep. It is hoped this transplant will utilize the historical sheep habitat in the canyon. The rough, rocky land supports important wildlife browse such as mountain mahogany, snowberry, and Gambel oak in addition to various forbs and grasses. Wildlife habitat management practices are limited due to the inaccessibility of the area. There are five spring developments presently planned in this unit to enhance wildlife habitat, specifically deer and bighorn sheep. There are no known threatened or endangered species.

Although not inside the WSA, the Arkansas River has an obvious interrelationship with this unit. The river is one of the main fisheries on public land in the entire Royal Gorge Planning Area. The Browns Canyon stretch of river supports a healthy self-sustaining brown trout population.

Cultural

Two aspects of this area contribute to its importance. First, it is located in the intermountain region between two major prehistoric culture areas - the Great Basin and the Plains. Second, the Arkansas River Valley offered a wealth of resources and habitats and a communication system to prehistoric people. The area has been partially surveyed and found to possess a high concentration of archaeological artifacts spanning a period from 10,000 years ago to the historic period. Because of findings this district may qualify for inclusion on the National Register of Historical Places.

Recreation/Visual

At present, two recreation opportunity spectrum (ROS) categories make up this unit: semiprimitive nonmotorized (55 percent) and semi-primitive motorized (45 percent). Refer to Appendix C-1 for more detail on the ROS.

The rugged nature of the land isolates the sights and sounds of man from the user. Exceptions include recreational activity along the Arkansas River, passing trains, and motorized traffic on the way leading from Ruby Mountain across the northern portion of the WSA.

The area is large and basically unchanged by man except for the railroad adjacent to the west boundary.

Recreation use in the main part of the WSA is light. However, the area can support primitive and unconfined recreation such as hiking, camping, wildlife photography, and similar activities. The Arkansas River and adjacent lands support substantial whitewater and fishing use (30,000 annual visits).

Presently, back-country travel in the unit totals approximately 100 annual recreation days and wilderness related activities (e.g. hiking, backpacking, etc.) are roughly 25 recreation days per year.

The area within the WSA is primarily characterized by rugged, rocky hills sparsely strewn with vegetation. Six substantial, intermittent drainages lead to the Arkansas River. Brief views of the Collegiate Peaks and manmade influences in the Arkansas Valley are available in some areas within the unit. Color within the unit is not outstanding; pinkish rock and soils and spotted evergreen are dominant.

The landscape of the deep and narrow Browns Canyon is dominated by the Arkansas River. The sideslopes are characterized by jagged, sculptured rock outcroppings with scattered stands of cottonwoods and willows near the water. The canyon is unfavorably marred by small transmission lines, the railroad, and associated structures.

The visual resource of this unit is rated Class II based on the following factors: 1) visual quality is rated B (A along the Arkansas River); 2) sensitivity is high; and 3) the unit lies in a foreground visual zone. Refer to Appendix D for more information concerning visual classifications.

Wilderness

This WSA varies in elevation from an average of 7,500 feet near the Arkansas River to about 8,400 feet near the eastern boundary. The topography of the unit is very rugged with many mountains, hills, canyons, and gulches.

Although the unit has a few imprints of man, it is primarily in a natural condition. A few mines and old cabin foundations remain within the area which are generally not visible from more than 75 feet due to topographic and vegetative screening. A way goes through the unit and is approximately 3 miles long; about three-quarters of a mile is cut and filled but is not visible except when at the site.

Opportunities for primitive and unconfined recreation have previously been discussed under Recreation/Visual.

The canyons and gulches offer outstanding opportunities for solitude since they block out sights and sounds. These specifically include Little and Middle Cottonwood Creeks, Cottonwood Creek, Spring Gulch, Sawmill Gulch, Green Gulch, and other unnamed gulches. In addition many of the gulches have cottonwood trees providing vegetative screening.

The Denver and Rio Grande Railroad tracks comprise approximately three-fourths of the western boundary. Passing trains (and whistle) can sometimes be heard up to a mile into the unit depending on a user's location.

The general area of the unit has a high concentration of archaeological artifacts spanning a period from 10,000 years ago to the historic period. This archaeological district may qualify for inclusion on the National Register of Historical Places.

As identified by the Baily-Kuchler Ecosystem map of ecoregions in the United States, the Browns Canyon WSA is in the pine Douglas-fir forest of the Rocky Mountain Forest Province.

In Colorado there are approximately 131,300 acres of existing wilderness and 123,940 acres of WSAs in pine Douglas-fir forest of the Rocky Mountain Forest Province. This ecosystem classification is fairly common to the surrounding region.

The unit can be reached within 1 day, 5 hours of driving, from six major population centers: Denver, Colorado Springs, Pueblo, Boulder, Fort Collins, and Greeley (approximately 2,400,000 people).

Realty and Access

There are no non-Federal inholdings within this unit. A 100-foot railroad right-of-way parallels the western boundary of the WSA. Adjacent lands are in mixed ownership - 80 percent Federal, 5 percent state, and 15 percent private. There are no other realty concerns within this WSA.

Physical access into the area is limited to the drainages leading up from the river due to the steep terrain. Legal access is available but limited.

Social/Economic

Social - Please refer to General Section at the beginning of this chapter.

Economic - Browns Canyon lies within Chaffee County which has been characterized by rapid growth. Population increased from 10,162 in 1970 to 13,227 in 1980, a change of 30.2 percent. However employment has not kept pace with population growth. The county unemployment rate has consistently been greater than the state by 1 to 2.5 percent and per capita income has been consistently lower. In 1969 estimated per capita income was $2,392 (Colorado $3,106); in 1977 it was $4,909 (Colorado $6,118).

Employment and income per capita indicate Chaffee County has a greater dependence on the tourist industry than the state average. Restaurant and lodging receipts per capita are 16 percent higher proportionately than the state.

McINTYRE HILLS (013)

This unit contains 16,800 acres of land located south of U.S. Highway 50 approximately 12 miles west of Canon City in Fremont County. The WSA lies south of the Arkansas River in T. 18 and 19 S., R. 72 and 73 W., 6th PM. (See Map III-2.)

Air

This unit is considered Class II by Federal Air Quality Standards. The Colorado State Pollution Control Commission has identified a large majority of this WSA as a zone of high air quality.

Geology and Minerals

This unit is located north and east of the Wet Mountains and south of the Thirtynine Mile volcanic field. Major rock units are of Precambrian age and consist generally of migmatitic gneisses and granodiorites. Migmatitic gneisses of this unit lost abundant pegmatites. The granodiorite units are variable containing rock types from quartz monzonite to quartz diorite. Sediments of the Webster Park Graben are located immediately to the east of the unit. Small amounts of Tertiary volcanics are found within the WSA. Faulting in the area is dominately north to northeast trending.

Mineral resources currently known in this WSA are minimal. There were 85 recorded mining claims as of December 31, 1981. There are 13,040 acres of subsurface minerals in Federal ownership and 760 acres in non-Federal.

Critical Mineral Resource Values

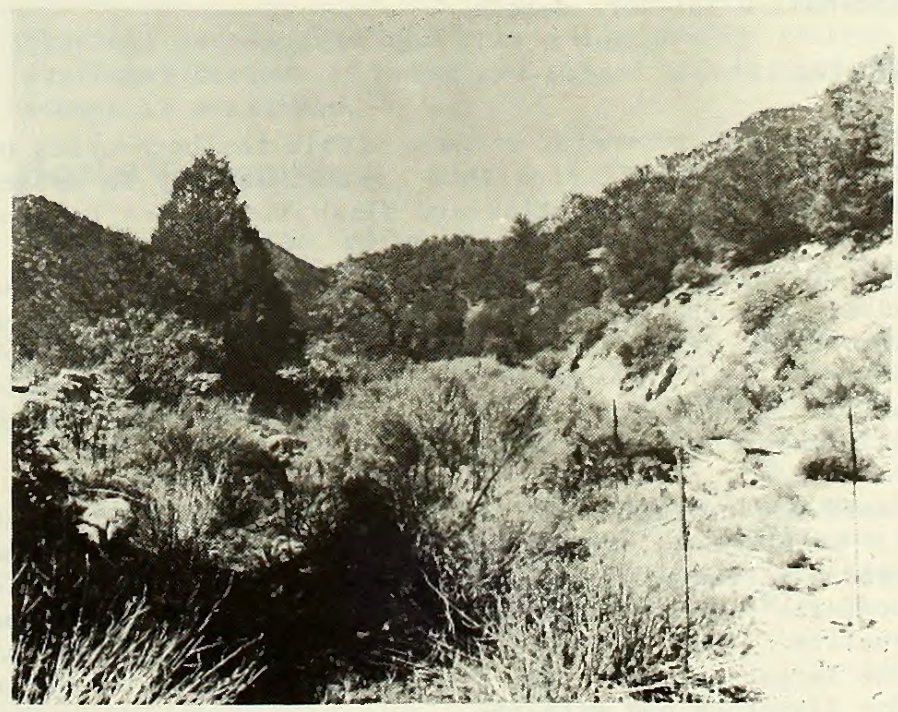
Based on a cursory mineral inventory and available mineral information the unit does not have any known economical deposits and appears to have only a minimal possibility for future discoveries. Some exploration and minor developments have occurred in areas around and within the unit. The major development has been of the many scattered pegmatites within the migmatitic gneiss and granodiorites. The pegmatites are zoned and consist mainly of quartz and feldspar with minor accessory minerals. The major amount of development has occurred outside of the unit, however, pegmatites are found within the WSA. Further development of these deposits is uneconomical at the present time due to their size, high production costs, and the shipping charges to users.

Tungsten mineralization has been reported from two prospects outside the WSA and one mine within the unit. There are no production records from any of these sites and assays taken from the mine within the WSA showed no evidence of tungsten mineralization. The possibilities for discovery of this type of mineralization within the units cannot be ruled out, however, there appears to be little interest at the present time.

The possible presence of uranium mineralization similar to that found in the Tallahasse mining district of Fremont County was identified in correspondence concerning this WSA. The cursory mineral inventory of the unit identified no anomalous areas. The current uranium price makes possible exploration interest in the area highly unlikely at this time.

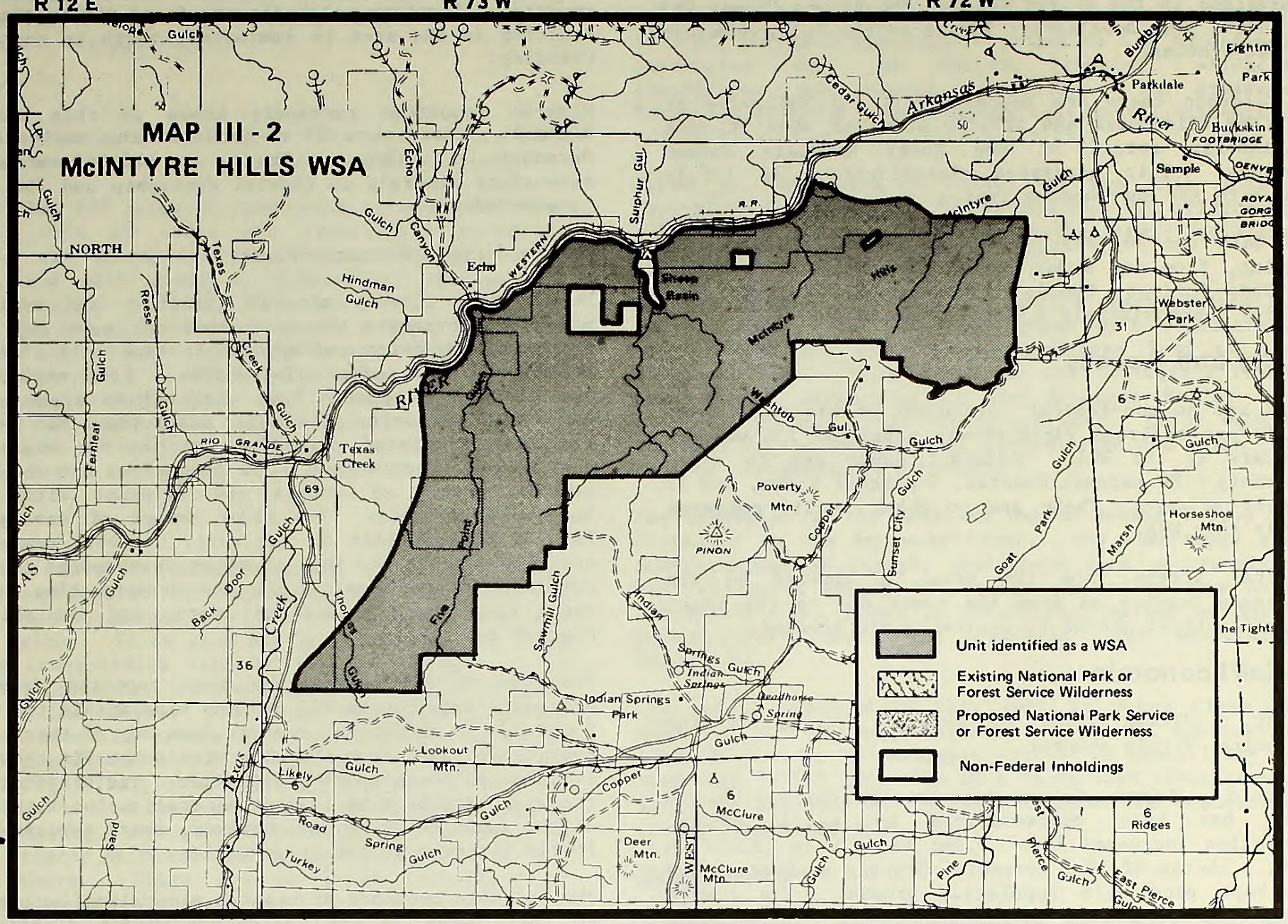
Energy Minerals

There appears to be very little possibility for the discovery of oil and gas, coal, or geothermal energy resources in the unit. Rock units suitable for source or reservoir formation are not known to exist in the area.



McIntyre Hills

CO-050-013



Other Minerals

Sand and gravel, fill, clay, etc. within the WSA have little or no value.

Soils

There are three soil associations within this WSA: Ustic Torriorthents-Rock outcrop, Boyle-Rock outcrop-Cathedral, and Raleigh-Wetmore-Rock outcrop. Refer to Appendix B for more detail.

Water

There are no perennial streams within the boundaries of this unit. Runoff from this area is usually in direct response to precipitation and flash floods are common.

All of the gulches in the unit drain into the Arkansas River with the exception of Thomas Gulch which drains into Texas Creek. When these gulches flood, they wash sediment into the river. Average annual sediment yield is estimated to be less than 0.2 acre-foot per square mile which is considered low.

There are no major aquifers in the area. Ground water is confined to weathered or fractured zones in the predominating metamorphic and igneous rocks. This unit contains several springs which yield water of good quality. Most of these are located in the bottoms of the larger gulches. All are important sources of water for livestock and wildlife.

Range

This unit is within two intensively managed allotments with 231 and 469 AUMs. Season of use is July 1 through December 15. The unit is considered predominately poor for livestock forage production but is ecologically stable. Major range forage consists mostly of mountain muhly and needle-and-thread grasses; rabbitbrush and pinon also occur. One developed spring is present in Five Points Gulch. A pinon-juniper thinning (1,120 acres) is planned on two sites.

Forestry

Pinon-juniper exists on the lower slopes with some ponderosa pine and Douglas-fir at higher elevations. Some broad leaf species such as cottonwood and aspen are found in the drainage bottoms. There are about 1,190 operable acres of woodland and approximately 571 acres of operable PFL. This woodland presently supports 7,735 cords of firewood and could produce 27,370 cords over a 150-year time span. The PFL in this WSA presently has 1,645 Mbf on the stump and could produce 5,332 Mbf over rotation age (120 years for Douglas-fir and 150 years for ponderosa pine). Intensive forest management is planned for this area.

Wildlife

The unit is habitat for species such as mule deer, mountain lion, black bear, and turkey. Various raptors such as golden eagle and prairie falcon nest within the

unit. Smaller birds and mammals are abundant around springs and creeks. This WSA is top priority as a bighorn sheep transplant area for Colorado Division of Wildlife. The sheep would probably utilize the northern portion of the unit as their home range. There are no known threatened or endangered species.

There are three water catchments, a 100-acre oakbrush burn, and a 500 acre pinon-juniper manipulation presently planned in this unit to enhance wildlife habitat, specifically deer, bighorn sheep, and turkey.

Cultural

No significant cultural resources are known to exist in this area.

Recreation/Visual

At present, three ROS categories make up this unit: semiprimitive nonmotorized (35 percent), semiprimitive motorized (47 percent), and roaded natural (18 percent). Refer to Appendix C-1 for more detail on the ROS.

U.S. Highway 50 is visible along the hillside on the northern boundary, however, other sights and sounds are not very evident and have no imposing effect on the semiprimitive experience opportunities of the area.

Access is limited to drainages due to the steep and rugged mountains which, along with gulches, provide abundant opportunities for solitude.

There are many opportunities for hiking, horseback riding, and other primitive recreation activity opportunity throughout this unit. Intermittent streams have deposited sand and gravel resulting in interesting accessible trails. In some areas the streams have worn through hard rock providing stair-stepped trails through the gorges and canyons. Various wildlife are available for photography and sightseeing.

Presently, the unit supports approximately 15 hunter days per year. Wilderness related activities (e.g. hiking, backpacking, etc.) account for roughly 30 recreation days per year.

This expansive area is characterized by rolling hills covered with pinon-juniper interspersed with steep, intermittent drainages. An occasional rock outcrop can be seen in the unit. The area is in a natural state but the landscape is common. Except for activity along U.S. Highway 50 which is perceptible only from the northern boundary of the unit there are very few outside influences. The color of the unit is rather dull (dark brown soil, grey-red rock and spotty evergreen greens) and there are no substantial manmade modifications or intrusion.

The visual resource in the northern portion of this unit (approximately 60 percent) is rated Class II based on the following factors: 1) visual quality is either A or B; 2) sensitivity is high; and 3) the area lies in a foreground visual zone. The balance of the unit is rated Class IV based on the following factors: 1) visual quality is either B or C; 2) sensitivity is medium; and 3) the area lies in a "seldom-seen" visual zone. Refer to Appendix D for more information concerning visual resource management.

Wilderness

The unit varies in elevation from an average of 5,900 feet near the Arkansas River to 8,100 at some of the higher mountain tops such as McIntyre Hills. The topography varies from gently rolling hills and small plateaus to extremely rugged mountains. The drainages generally follow a south to north direction with many side canyons. Vegetation consists primarily of pinon-juniper throughout the unit with some pine and fir in the higher elevations.

Although the WSA is primarily in a natural condition, it has some minor imprints of man. These imprints include a way, mineral exploration pits, and an old corral.

Opportunities for primitive and unconfined recreation have been previously discussed in the Recreation/Visual Section.

Outside sights and sounds are not very evident in the unit. In general, the mountains, drainages, and gulches in the unit provide many opportunities for solitude.

There are no known special features in this unit. Generally the WSA is fairly typical of lands in southern Colorado.

As identified by the Baily-Kuchler Ecosystem map of ecoregions in the United States, the McIntyre Hills WSA is in the pine-Douglas fir forest of the Rocky Mountain Forest Province.

In Colorado there are approximately 131,300 acres of existing wilderness and 123,940 acres of WSAs in pine Douglas-fir forest of the Rocky Mountain Forest Pronvince. This ecosystem classification is fairly common to the surrounding region.

The unit can be reached within 1 day (5 hours) of driving from six major population centers: Denver, Colorado Springs, Pueblo, Boulder, Fort Collins and Greeley (approximately 2,400,000 people).

Realty and Access

There is one state inholding totaling 350 acres and two private inholdings totaling 60 acres within the boundaries of this unit. The WSA is surrounded by public, state, and private lands and is separated from adjacent lands by roads. Adjacent lands are in mixed ownership - 75 percent Federal, 22 percent state, and 3 percent private.

Portions of the unit along the northern acres have been withdrawn for a powersite.

Physical access into the area is generally limited to drainages because of steep and rugged mountains. Legal access is available.

Social/Economic

Social - Please refer to General Section at the beginning of this chapter.

Economic - This unit lies within Fremont County which has been characterized by rapid growth. Population increased from 21,942 in 1970 to 28,676 in 1980, a change of 30.7 percent. However, employment has not kept pace with population growth. The county unemployment rate has been consistently greater than the state by 1 to 1.5 percent and per capita income has been consistently lower. In 1969 estimated per capita income was $2,261 (Colorado $3,106); in 1977 it was $4,909 (Colorado $6,118).

LOWER GRAPE CREEK (014)

This unit contains 11,220 acres located approximately 6 miles southwest of Canon City in Fremont and Custer Counties. The WSA lies within T. 19 S., R. 71 and 72 W. and T. 20 S., R. 71 W. 6th PM. (See Map III-3.)

Air

This unit is considered Class II by Federal Air Quality Standards. The Colorado State Air Pollution Control Commission has identified a large portion of this WSA as a zone of high air quality.

Geology and Minerals

This unit is located on the northern end of the Wet Mountains. Most of the rock exposed in the units is Precambrian in age and consists mainly of migmatitic gneisses of sedimentary and volcanic origin. These gneisses have been intruded by granodiorites in several locations within the WSA. The unit has been highly faulted and falls into prominent west-northwest and northeast trends. The northern portion of Lower Grape Creek unit contains sedimentary units preserved in the Webster Park Graben.

There is some potential for mineral discovery, however, known mineral resources have not been proven. There were 67 mining claims as of December 31, 1981. There are 10,630 acres of subsurface minerals in Federal ownership and 590 acres in non-Federal.

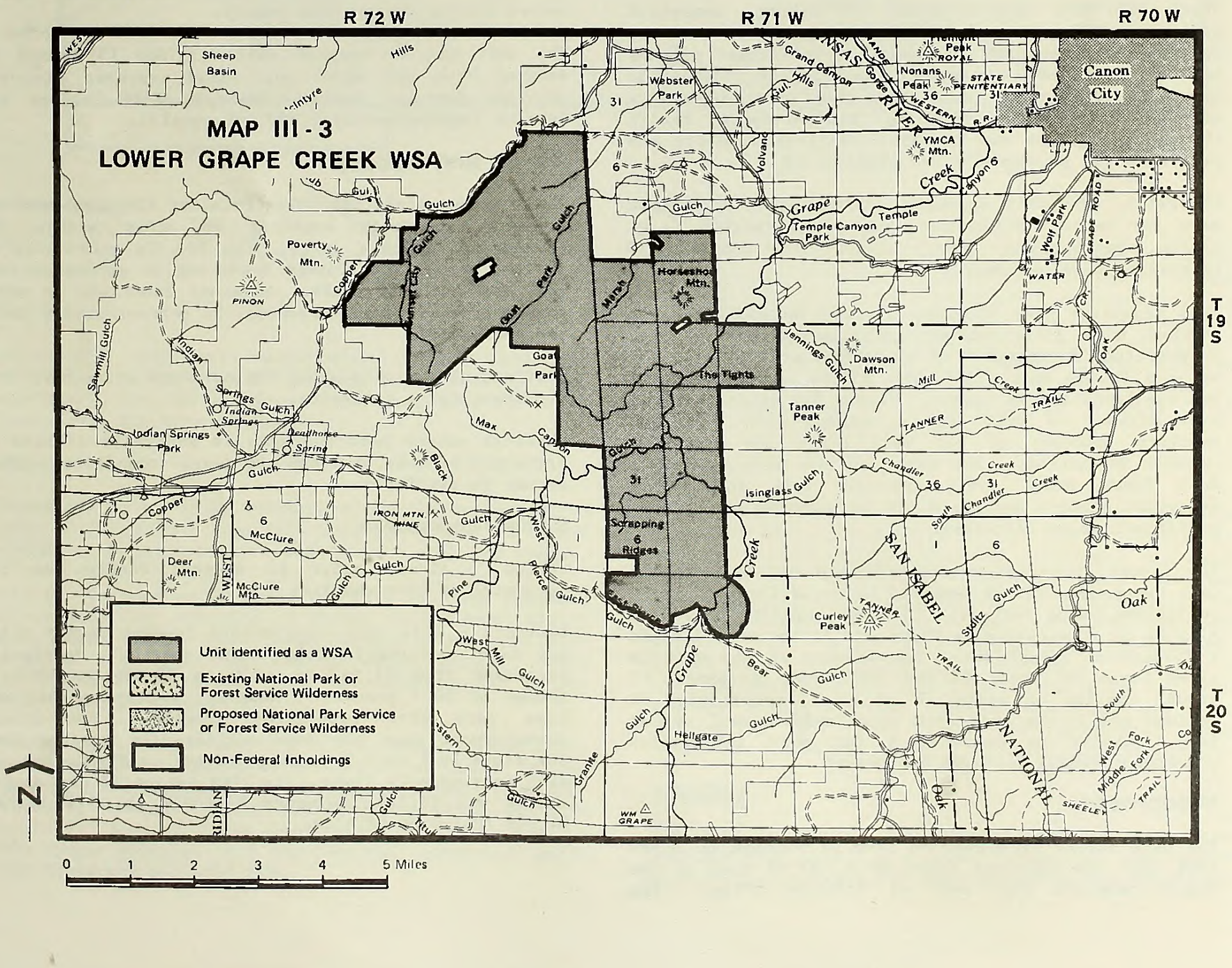
Critical Mineral Resource Values

This WSA has the potential for the discovery, location, and possible development of several different types of locatable minerals, i.e. copper, lead, silver, etc. The area had some past production from small localized ore zones that could be marginally profitable at 1980 metal prices. There has been continuing interest in this area by several different mining companies and individuals indicating the possible presence of mineral deposits. For further site specific information refer to report by Barringer Resources "Geochemical and Geophysical Evaluation of the Arkansas Canyon Planning Unit, Fremont and Custer Counties, Colorado" prepared under contract for BLM. Also see mineral report completed by Robert Coker, BLM Mining Engineer, concerning "Mineral Resources of the Arkansas Canyon Planning Unit." Both reports are available for review at the Canon City District Office.

Energy Minerals

There has been no prior exploration or development of any known leasable minerals in this WSA. There are approximately 480 acres of sediments suitable for petroleum reservoirs and source rocks in Secs. 8 and 17, T. 19 S., R. 71 W. However, due to a complete absence of exploration or interest this value is believed to be minimal. Portions of the WSA are within an area designated by the USGS as being prospectively valuable for geothermal.

CO-050-014



Other Minerals

The following mineral resources are broken down individually by commodity and findings are based on sources identified above.

Anomalous concentrations for barite are found in association with Precambrian migmatic gneiss, especially adjacent to the McClure Mountain Complex. These anomalous values are probably due to barite gangue mineralization present in veins and fracture zones. Barite in association with base metals has been mined in the area of Grape Creek and East Pierce Gulch, however, barite mineralization in a deposit of economic size has not been identified within the unit.

Very minor amounts of gold have been found associated with the copper, lead, and zinc deposits mentioned above. There are no known occurrences of gold in economic deposits or placers in the WSA.

There are large amounts of salable mineral resources, i.e. sand and gravel, fill, and moss rock in the WSA, however, these resources are present at other sites in the region which are more accessible and require less operating costs. Therefore, the relative value of these resources in the WSA is minor.

Soils

There are five soil associations within this WSA: Brownsto-Martinsdale-Amalia, Ustic Torriorthents-Rock outcrop; Granite-Seitz-Larand, Boyle-Rock outcrop-Cathedral, Sedillo-Quazo-Rock outcrop, and also units of outcrop. Refer to Appendix B for more detail.

Water

Grape Creek meanders through portions of the study area. The unit itself contributes little runoff to the stream, except in the case of flash floods. Floods originating in dry gulches tributary to the stream can have a profound effect on Grape Creek depending on their size and duration. The floods are the result of intense rainfall falling on shallow, rocky soils. Resource management in areas such as these has little effect on the frequency and magnitude of flooding.

The water quality of Grape Creek is good except during periods of flash floods when turbidity and suspended sediment are greatly increased. Otherwise, it is suitable for most common uses, including a municipal water supply.

The geology of the area consists almost entirely of metamorphic and igneous rocks. Ground water is restricted to weathered and fractured zones within these rocks. Yields to wells would probably be less than 10 gallons per minute. Average annual sediment yield is estimated to be around 0.2 acre-foot per square mile which is considered to be a low to moderate rate.

Range

The unit has one intensively managed allotment with 231 AUMs. Season of use is July 1 through October 15. Forage consists mainly of low-growing brush and the major range forage species are mountain muhly and needle-and-thread. Range condition is considered mostly marginal for livestock forage production. Good forage production areas such as the riparian zones along Grape Creek have been overgrazed. Improvement of habitat and forage species condition is of major concern in this unit. Improvements planned for this unit include six spring developments and approximately 1 3/4 miles of fencing along Grape Creek.

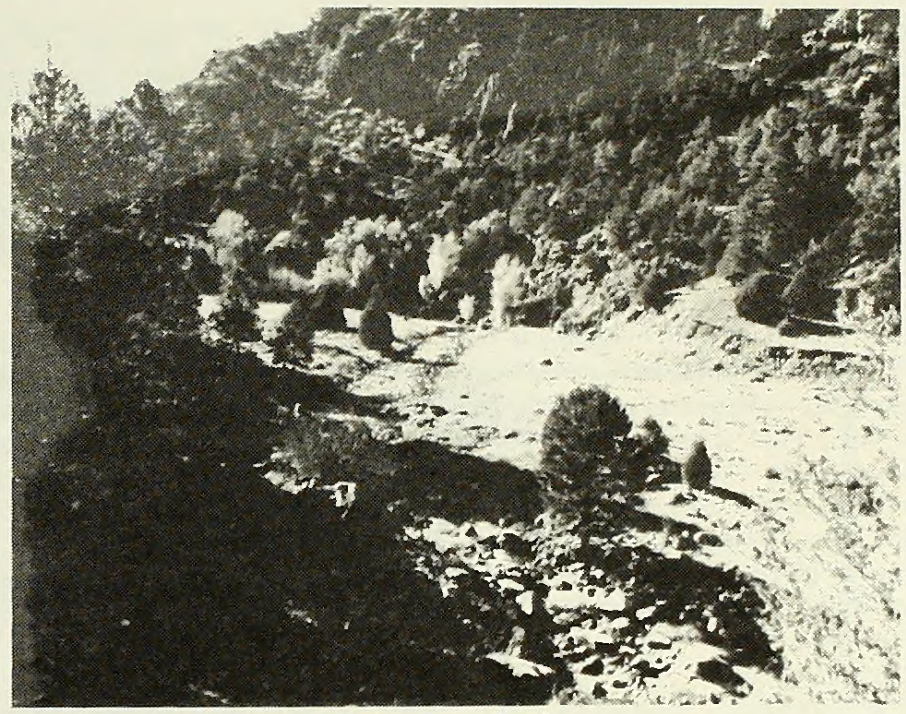
Forestry

Pinon-juniper exists on the lower slopes with some ponderosa pine and Douglas-fir at higher elevations. Some broad leaf species such as cottonwood and aspen are found in the drainage bottoms.

There are 389 acres of operable PFL and 1,910 acres of operable woodlands. This represents 8,558 Mbf of sawtimber and 43,930 cords of firewood for the woodland resource at the end of rotation age. Volumes on the ground now include 2,527 Mbf of sawtimber and 12,085 cords of pinon pine and juniper firewood. Intensive forest management is planned for this area in the future.

Wildlife

This unit provides habitat for mule deer, mountain lion, black bear, and turkey. Small birds and mammals are abundant near water but are found throughout the unit. Several species of raptors are found in the area. There are no known threatened or endangered species.



Lower Grape Creek

There are three water catchments and a 500-acre vegetation manipulation presently planned in this unit to enhance wildlife habitat, specifically for deer and turkey.

Grape Creek flows through the unit providing for stream fishery habitat. This is the only perennial stream in the unit and provides approximately 4 miles of stream or streamside habitat (aquatic and riparian) in the unit. The habitat is considered to be in poor condition and continues to gradually decline because of improper grazing. This is resulting in a decrease of the trout fishery and an increase in the nongame fishery. Stream habitat improvements such as placement of log dams, wing gabions, and riparian protective fencing are presently planned.

The Arkansas Canyon Habitat Management Plan covers this unit. Intensive inventory work has been completed and habitat improvement work is being done within wilderness management guidelines.

Cultural

Although no sites have been recorded in the unit it is believed that some prehistoric values probably do occur. According to the Royal Gorge Resource Area URA prehistory, resources in this WSA are not significant. Little information exists on which to make definitive statements concerning this prehistory.

Historical development in the unit consisted of mineral prospecting, mining, extraction, railroading, agriculture and livestock grazing, and recreation use.

Recreation/Visual

At present, three recreation opportunity spectrum (ROS) categories make up this unit: semiprimitive nonmotorized (56 percent), semiprimitive motorized (31 percent), and roaded natural (13 percent). Refer to Appendix C-1 for more detail on the ROS.

Although vegetation within the unit is rather sparse, topography is steep and rugged and the unit is removed from transportation routes and other influences of man.

There are several imprints of man within the unit. However, most of the imprints are historical and do not detract substantially from naturalness or solitude.

Opportunities for primitive recreation are readily available - hiking, horseback riding, photography, backpacking, fishing (in a primitive setting). Trail bike riding, especially along Grape Creek, is also very popular.

Existing hunting use amounts to about 25 hunter days and 125 fisher days per year. Other wilderness-related activities (e.g. hiking, backpacking, etc.) approach 100 annual recreation days. Trail bike use and other back-country travel amount to about 100 annual recreation days. More than 90 percent of the recreation use within the unit is concentrated along Grape Creek.

The Grape Creek corridor is the major visual attraction within this unit. The sidewalls are very steep and rugged, occasionally sheer. The riparian vegetation along the creek is very attractive. Outside of the corridor, lands are moderately sloping interspersed with narrow drainages containing dry, sandy streambeds. The area exhibits muted colors (dark greens, yellows, light golds, and reddish-brown soils). There are little outside views and the landscape within the unit is very common.

The visual resource in one-third of this unit (northwest portion and near Temple Canyon) is rated Class II based on the following factors: 1) visual quality is rated B; 2) sensitivity is medium; and 3) the unit lies in the foreground and visual zone. The balance of the unit is rated Class IV based on the following factors: 1) visual quality is B or C; 2) sensitivity is medium; and 3) the area lies in a "seldom seen" visual zone. Refer to Appendix D for more information concerning visual resource management.

Wilderness

The Lower Grape Creek WSA varies in elevation from 6,400 feet near Webster Park to an average of 8,300 feet on peaks near Goat Park. The topography of the unit is steep and rugged with hillsides primarily covered with pinon and juniper.

An old gold mine in Goat Park Gulch is well screened by vegetation but an associated tailing pile is more evident. Further up the gulch approximately one-half mile are the remains of an old cabin. Behind the cabin is a way going west for one-half mile to an abandoned mine site on patented land. Although there are several significant cut banks, the majority of the way is screened by pinon and juniper. A way along Marsh Gulch leading to another abandoned mine on patented land has been cut and filled at various locations. This way is screened by pinon and juniper in some locations.

Opportunities for primitive and unconfined recreation have been discussed in the previous Recreation/Visual section.

This unit contains drainages such as Sunset City Gulch, Goat Park Gulch, and Grape Creek which wind through mountains. The topography in addition to the vegetation in some locations provides this unit with screening from sights and sounds outside the unit. Due to these factors this unit has opportunities for solitude.

In 1881 a narrow gauge railroad was constructed along Grape Creek, however, in 1889 it was abandoned. A few cut banks, rails, and metal poles still remain along Grape Creek. The remaining portion of this railroad grade is a special feature because of the historical significance.

As identified by the Baily-Kuchler Ecosystem map of ecoregions in the United States, the Lower Grape Creek WSA is in the pine-Douglas fir forest of the Rocky Mountain Forest Province.

In Colorado there are approximately 131,300 acres of existing wilderness and 123,940 acres of WSAs in pine Douglas-fir forest of the Rocky Mountain Forest Province. This ecosystem classification is fairly common to the surrounding region.

The unit can be reached within 1 day (5 hours) of driving from six major population centers: Denver, Colorado Springs, Pueblo, Boulder, Fort Collins, and Greeley (approximately 2,400,000 people).

Realty and Access

There are two private inholdings totaling 75 acres. In addition there is a reservoir right-of-way of approximately 190 acres. The abandoned railroad right-of-way goes through five sections of the WSA. It appears there is no validity of claims to the railroad right-of-way proper as the lands reverted back to the United States when the right-of-way was abandoned.

Adjacent lands are in mixed ownership - 51 percent Federal, 16 percent state, and 33 percent private. Physical and legal access is available, but limited.

Social/Economic

Social - A total of 10 comments were received stating the unit has strong mineral potential.

Economic - This unit lies within Fremont County which has been characterized by rapid growth. Population increased from 21,942 in 1970 to 28,676 in 1980, a change of 30.7 percent. However, employment has not kept pace with population growth. The county unemployment rate has been consistently greater than the state by 1 to 1.5 percent and per capita income has been consistently lower. In 1969 estimated per capita income was $2,261 (Colorado $3,106); in 1977 it was $4,909 (Colorado $6,118).

BEAVER CREEK (016)

This unit contains 26,150 acres located 10 miles northeast of Canon City in Fremont, Teller, and El Paso Counties. The WSA lies within T. 16 S., R. 67, 68 and 69 W.; T. 17 S., R. 68 and 69 W., 6th PM. (See Map III-4.)

Air

This unit is considered Class II by Federal Air Quality Standards. The Colorado State Air Pollution Control Commission has identified most of the northern portion of this WSA as a zone of high air quality.

Geology and Minerals

The WSA is situated on the southern end of the Front Range with the major rock units of the area consisting of granites and migmatitic gneisses and schists. The southern portion of the unit has several different sedimentary units of Paleozoic age which form the northeast-southwest trending foothills of the WSA. The major geologic structure of the entire area is the Pikes Peak Batholith to the north.

There are no known significant resources in and around this WSA. As of December 31, 1981, there were two recorded mining claims. There are 26,150 acres of subsurface minerals in Federal ownership.

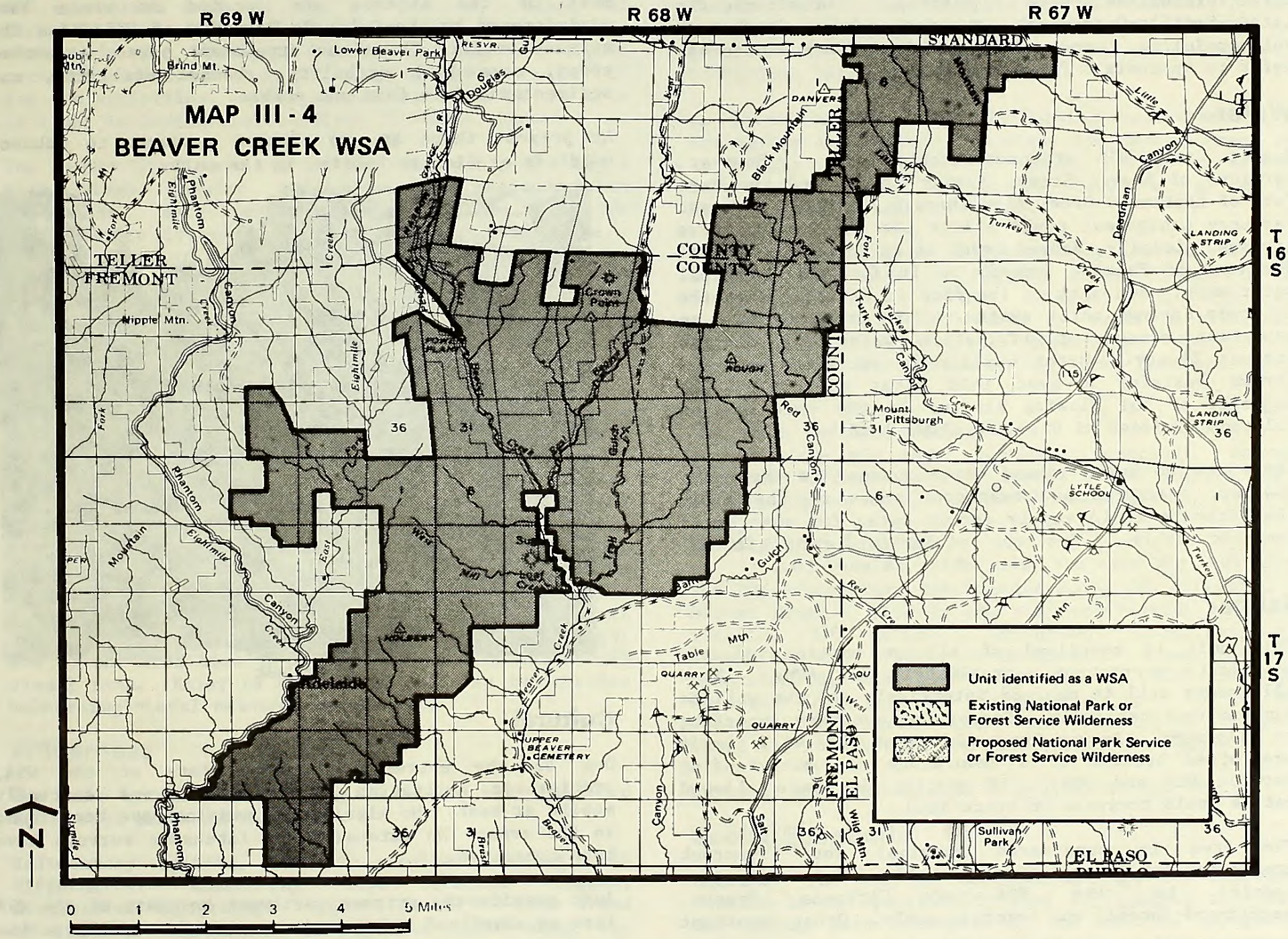
Critical Mineral Resource Values

The possibility of mineral development within the WSA, based on available information, appears to be minimal. Interest for mineral resources within the WSA has been limited to the exploration of small pegmatites and fluorite. Some fluorite development occurred during the middle to late 1950s, however, no production figures are available. The production of fluorite from the unit was minor and hand sorting of the ore was required. Insufficient reserves remain at the site for further development and it is unlikely that new reserves would be found; if they are it is unlikely they would be put into production.

The pegmatites within the WSA are small and for the most part unzoned. Pegmatites are scattered throughout the area, but are so small that only a very few have been explored, the largest one located in Trails Gulch. The size and location of these pegmatites make their resource value very small.

Minor development work for the manganese has been done in Sec. 26, T. 17 S., R. 69 W., 6th PM from a strata bound deposit situated between Ordivician sediments and Precambrian metamorphics. The deposit is believed to be isolated and no evidence of major mineralization has been identified within the WSA.

There are currently no known deposits of uranium within the unit and the only anomalous values identified are associated with the fluorite in West Mill Gulch. A



preliminary mineral inventory of the WSA identified no significant uranium anomalies and little potential appears to exist in the area.

Energy Minerals

There has been no known interest in the resource potential for oil and gas, coal, phosphate, or geothermal within the WSA. The geologic setting, lack of suitable source, and reservoir formations make the potential for these minerals unlikely.

Other Minerals

The northwest portion of the WSA is only 5 miles from the Cripple Creek-Victor mining area. However, no known deposits of vein gold have been found or developed. A relatively small amount of placer gold has been obtained from gravel in Beaver Creek proper. This area has been patented and there are no known reserves in the WSA.

A red to buff colored refractory clay with large amounts of interstitial sandstone is currently being excavated from a mine in Sec. 35, T. 17 S., R. 69 W., 6th PM (outside the WSA boundary). This material can be traced southwest into the remainder of Secs. 35 and 34 and northwest into Sec. 25. Present reserves outside of the WSA should be sufficient for the existing captive market. Other salable items are very insignificant.

Soils

There are five soil associations within the WSA: Ustic-Torriorthents-Rock outcrop, Granite-Seitz-Larand-Sedillo-Quazo-Rock outcrop, Cold Creek-Rock outcrop-Kutler, and Raleigh-Wetmore-Rock outcrop. Refer to Appendix B for more detail.

Water

Beaver Creek WSA produces little water. However, portions of Beaver Creek, Turkey Creek, and the East Fork of Eightmile Creek flow through the study area and resource management could affect the quality of these streams. Locally, Beaver Creek is an important stream. The town of Penrose depends on it for its municipal water supply and part of the flow is diverted into the Colorado Springs water system. This creek is also an important source of irrigation water for eastern Fremont County. Water quality is excellent and the stream sustains a good cold water fishery. The majority of the flowing streams in the unit are on Colorado Division of Wildlife (DOW) land.

There are no known ground water sources in the unit. However, fractured and weathered zones of the Pikes Peak Granite could supply enough water for some small domestic wells. Sediment yield is less than 0.1 acre-foot per acre per year, which is very low.

Range

This unit is comprised of all or portions of six allotments supporting approximately 325 AUMs. Four allotments will be managed intensively and two will be managed nonintensively. Seasons of use vary according to allotment. Beaver Creek Allotment #127 will remain unallotted because of a memorandum of understanding between BLM and DOW. If grazing use were allowed cattle would trespass on state land.

The area is considered marginal for livestock production but is ecologically stable. Key range grass species in this WSA are Arizona fescue, needle-and-thread, and mountain muhly. Other important range plants present are blue grama grass and mountain mahogany. Existing range improvements include some boundary fencing, a spring development, and pipeline. No additional improvements are planned for this unit.

Forestry

This WSA contains 177 operable acres of PFL which presently support 1,098 Mbf of sawtimber and could produce 4,044 Mbf by the end of rotation. The 3,290 operable acres of woodland support 10,300 cords of firewood presently and could produce 75,670 cords over rotation. Intensive forest management is planned for this unit in the future.

The unit encompasses a wide variation of timber types and as a result there is high species diversity. Pinon pine and juniper are abundant; other dominant species include ponderosa pine and Douglas-fir. White fir, spruce, and aspen are also present. A significant amount of timber is infested with mountain pine beetle (476 acres) and mistletoe (1,089 acres).

Wildlife

This unit is so vast that virtually all habitat types common in this area are represented. The terrain is extremely rough and unroaded. Common species in the unit are mule deer, bighorn sheep, mountain lion (heavy concentrations), and black bear. In addition, a pair of endangered peregrine falcons have been seen in Beaver Creek and are suspected of nesting in the unit. There are no other known threatened or endangered species in the unit.

Most of the streams are located on state land administered by the Colorado Division of Wildlife. The streams profile (based on streambank cover, streambed cover, streambank stability, channel stability, and sedimentation) is fair and stable.

At present there are no planned projects to enhance wildlife or fishery habitat in the unit.

Beaver Creek

Cultural

Due to the extremely rugged nature of the WSA, prehistoric habitation of this area was extremely mobile at best. No significant remains have been found in the area. No extensive nor intensive surveys have been conducted.

Just outside the extreme northwest boundary of the WSA lies an abandoned hydroelectric powerplant. A pipeline

from Skagway Reservoir supplied water to the plant which operated from 1922 until 1964 when it was destroyed by a flood. The inoperable structure, pipeline, and associated railway are still visible.

Recreation/Visual

Four recreation opportunity spectrum (ROS) categories make up this unit: primitive (47 percent), semiprimitive nonmotorized (33 percent), semiprimitive motorized (18 percent), and roaded natural (2 percent). Refer to Appendix C-1 for more detail on the ROS.

The Beaver Creek WSA allows excellent opportunities for an individual to escape the sights and sounds of man. The topography, rock outcrops, water, and other resources provide outstanding opportunities for challenge and risk.

This unit is virtually unchanged by the influences of man. Some range fences, old trails, and mining scars are the main manmade intrusions in the unit. Evidences of man outside of the WSA (primarily to the south) can be seen from ridgetops on the periphery of the area. Terrain restricts vehicular travel, even in areas considered motorized by ROS criteria.

Dispersed primitive recreation opportunities in the unit are plentiful and most are located along the stream corridors. Opportunities include hiking, fishing, camping, wildlife viewing, and photography.

Lands along Beaver Creek annually support approximately 280 recreation days per year for fishing, hiking, and backpacking. Pulloffs along Phantom Canyon road, within the WSA boundary, sustain approximately 1,188 recreation days per year for camping and a variety of day use activities. Other recreational use in the area is light including approximately 75 hunter days.

The Beaver Creek unit is cut by very steep drainages with steep angular walls heavily covered with evergreens. Bare rock outcrops and fairly extensive grass slopes irregularly dot the area. There are a variety of colors: black soils, reddish-brown to grey rock, clear stream, dark green, yellow, gold and light grey vegetation. Both West Beaver and East Beaver Creeks meander through miles of jagged walls with interesting and diverse vegetation and no significant intrusions.

Roughly, the southern one-third of the visual resource in the Beaver Creek WSA is Class IV based on the following factors: 1) visual quality is rated B or C; 2) sensitivity is medium; and 3) the unit lies in the background or "seldom seen" visual zone. The western third (including those lands along West Beaver Creek) is Class II based on the following factors: 1) visual quality is rated A; 2) sensitivity is mostly high; and 3) the area lies in a foreground zone. The eastern third is Class III based on the following: 1) visual quality is rated B; 2) sensitivity is medium or high; and 3) the area lies in a "seldom seen" or background visual zone. Refer to Appendix D for more information concerning visual resource management.

Wilderness

The unit varies from rolling hills in the south to 9,000-foot peaks in the north.

Sedimentary uplifts, fault controlled streams, and differential weathering have created rugged, diversified topography. Vegetation varies from areas of semiarid vegetation, to riparian zones along the streams, to conifer/pine forest mixes on the higher elevations. BLM and DOW have signed a memorandum of understanding in which Colorado State land along Beaver Creek and adjacent BLM lands would be managed consistent with wilderness management objectives.

Minor imprints of man exist within the unit boundaries. Old ways along West and East Mill Gulch and maintenance trails along an old powerline are present and an occasional wooden power pole still stands. Some small exploration pits and mining scars are evident at the confluence of the two forks of Beaver Creek and along

East and West Mill Gulch. Along the bottom of Trail Gulch a way goes from the southern part of the WSA to the East Fork of Beaver Creek at the northern boundary. This way was cut and filled in a few locations, however, these sites are generally well screened by vegetation. The remainder of the way is starting to grow over and is generally inconspicuous.

The topography of this unit is very steep with many deep drainages. The variation in topography, in combination with the vegetation mentioned earlier, provides good opportunties for solitude. Beaver Creek and the East and West Forks of Beaver Creek are good examples of topographic screening within the unit. There are no outside sights or sounds which would have an effect within the WSA.

Opportunities for primitive and unconfined recreation have been discussed in the previous Recreation/Visual section.

The unit has an old log cabin at the confluence of East and West Beaver Creeks and the remains of an old powerline (a few wooden poles remain) which may be of historical interest to area users.

As identified by the Baily-Kuchler Ecosystem map of ecoregions in the United States, the Beaver Creek WSA is in the pine Douglas-fir forest (20,000 acres) and the western spruce fir forest (6,000 acres) of the Rocky Mountain Forest Province.

In Colorado there are approximately 131,300 acres of existing wilderness and 123,940 acres of WSAs in the pine Douglas-fir forest category. There are approximately 1,794,507 acres of existing wilderness and 146,150 acres of areas pending and WSAs in the western spruce fir forest of the Rocky Mountain Forest Province.

The unit can be reached within 1 day (5 hours) of driving from six major population centers: Denver, Colorado Springs, Pueblo, Boulder, Fort Collins, and Greeley (approximately 2,400,000 people).

Realty and Access

The DOW administers state lands along the streambed of Beaver Creek. This is the only non-Federal inholding totaling 870 acres. Management objectives are compatible with wilderness management. A memorandum of understanding has been completed by BLM and DOW. Adjacent lands are in mixed ownership - 22 percent Federal, 18 percent state, and 60 percent private. There are no other realty concerns within this WSA.

Physical and legal access is available, but limited.

Social/Economic

Social - The city of Colorado Springs has expressed concern of the possibility that air quality standards may become more stringent if the unit is designated wilderness. The city believes if air quality standards

are changed, the growth of Colorado Springs could be limited.

The concern has been addressed in Chapter II, Issues of Public Conern.

Economic - Beaver Creek lies within the three counties of El Paso, Fremont, and Teller which have been characterized by rapid growth. Population increased from 260,230 in 1970 to 346,134 in 1980, a change of 33 percent. However, employment has not kept pace with population growth. The unemployment rate of these counties has consistently been greater than the state by less than 1 percent and per capita income in all three counties has been consistently lower. In 1969 estimated per capita income was $2,859 (Colorado $3,106); in 1977 it was $5,168 (Colorado $6,118). Per capita income in El Paso County is significantly higher than in Fremont or Teller County.

UPPER GRAPE CREEK (017)

This WSA contains a tract of land containing 10,200 acres located approximately 10 miles southwest of Canon City in Fremont and Custer Counties. The unit lies within T. 20 S., R. 71 and 72 W., and T. 21 S., R. 71 and 72 W. 6th PM. (See Map III-5.)

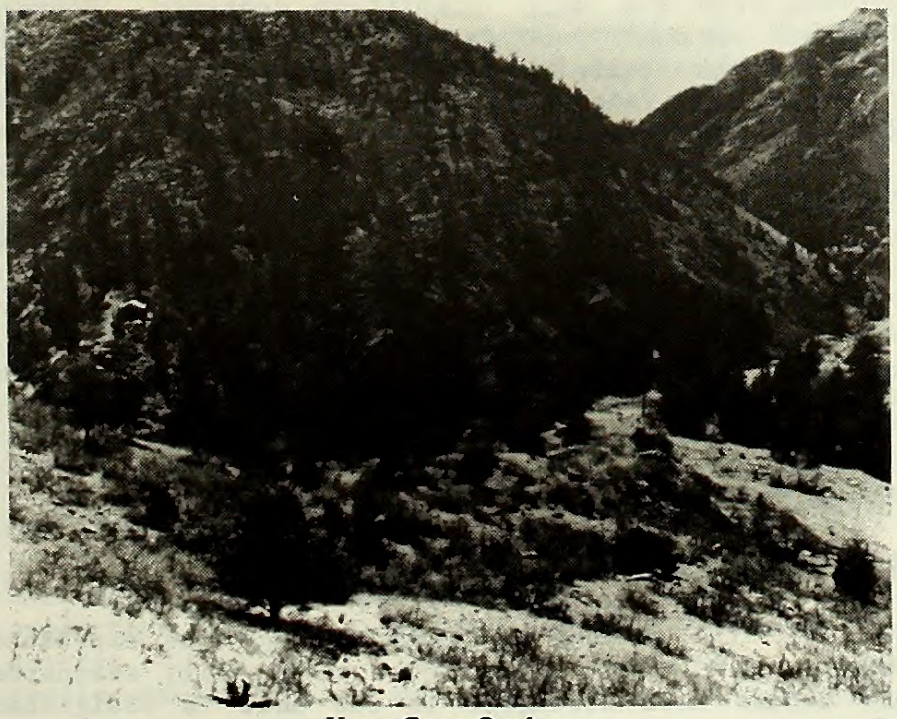
Air

This unit is considered Class II by Federal Air Quality Standards. The Colorado State Air Pollution Control Commission has identified a large portion of this WSA as a zone of high air quality.

Geology and Minerals

This unit is located on the northern end of the Wet Mountains. Most of the rock exposed in the unit is Precambrian in age and consists mainly of migmatitic gneisses of a sedimentary and volcanic origin. These gneisses have been intruded by granodiorites in several locations within the WSA. The unit has been highly faulted and falls into a prominently west-northwest and northeast trend.

There are no known significant mineral resources in and around this WSA. As of December 31, 1981, there were 148 recorded mining claims. There are 9,840 acres of subsurface minerals in Federal ownership and 360 in non-Federal.



Upper Grape Creek

Critical Mineral Resource Values

Only minor anomalous findings for copper were found in this WSA. There has been very little past or present known exploration in this area. This resource is not believed to be of great significance at this time.

The geochemical finding for lead in this area is not of significant value, however, some interesting anomalies are present. The area has had only minor exploration for this resource. Galena is found associated with the barite deposit in the Pierce and Grape Creek area. Significant lead deposits in the Oak Creek area were developed near the turn of the century. The Terrible Mine shipped concentrates in excess of $500,000 prior to 1889. There seems to be some potential for lead exploration in this area.

Geochemically anomalous areas for molybdenum are present in the area of Democrat Creek. Values present for this area are a maximum of 10 ppm indicating weak to moderate enrichment. There is no known past nor present exploration or production in this area. This resource is not considered significant.

The majority of the known thorium veins are located immediately south of the WSA. These veins occur in shattered, limonite stained materials along faults in the Precambrian crystalline rocks.

This type of environment occurs within the WSA. The geochemical study shows no areas of significant anomalous values within the WSA.

The Iron Mountain Complex shows the magmatic segregation features which could contain deposits of chromite, ilmonite, apatite, and magnetite. The only known occurrence of a minable deposit is the titaniferous magnetite of the Iron Mountain Mine. There has been no exploration nor development of any of these minerals in the WSA. This resource is not believed to be significant.

There are no anomalous values for zinc in the WSA. There has been no known exploration nor development and this resource is not believed to be significant. Some zinc could be expected to be found in association with any lead deposits in the area.

Energy Minerals

This area has had no prior leasing nor exploration history and formations suitable for source rock or reservoirs are not known to exist in the area. This area is believed to have very limited potential for any leasable mineral.

Other Minerals

Anomalous barite values are found in many parts of the WSA. Generally they are associated with the regional distribution of the Precambrian migmatic gneisses, especially near the McClure Mountain Complex.

Production and extensive exploration for barite have occurred in the past over a large portion of the WSA, however, the relatively low grade and scattered distribution of the resources makes it economically infeasible at this time.

There are large quantities of salable minerals at other sites in the region which are more accessible and require less operating costs. Therefore, the relative value of these resources in the WSA is insignificant.

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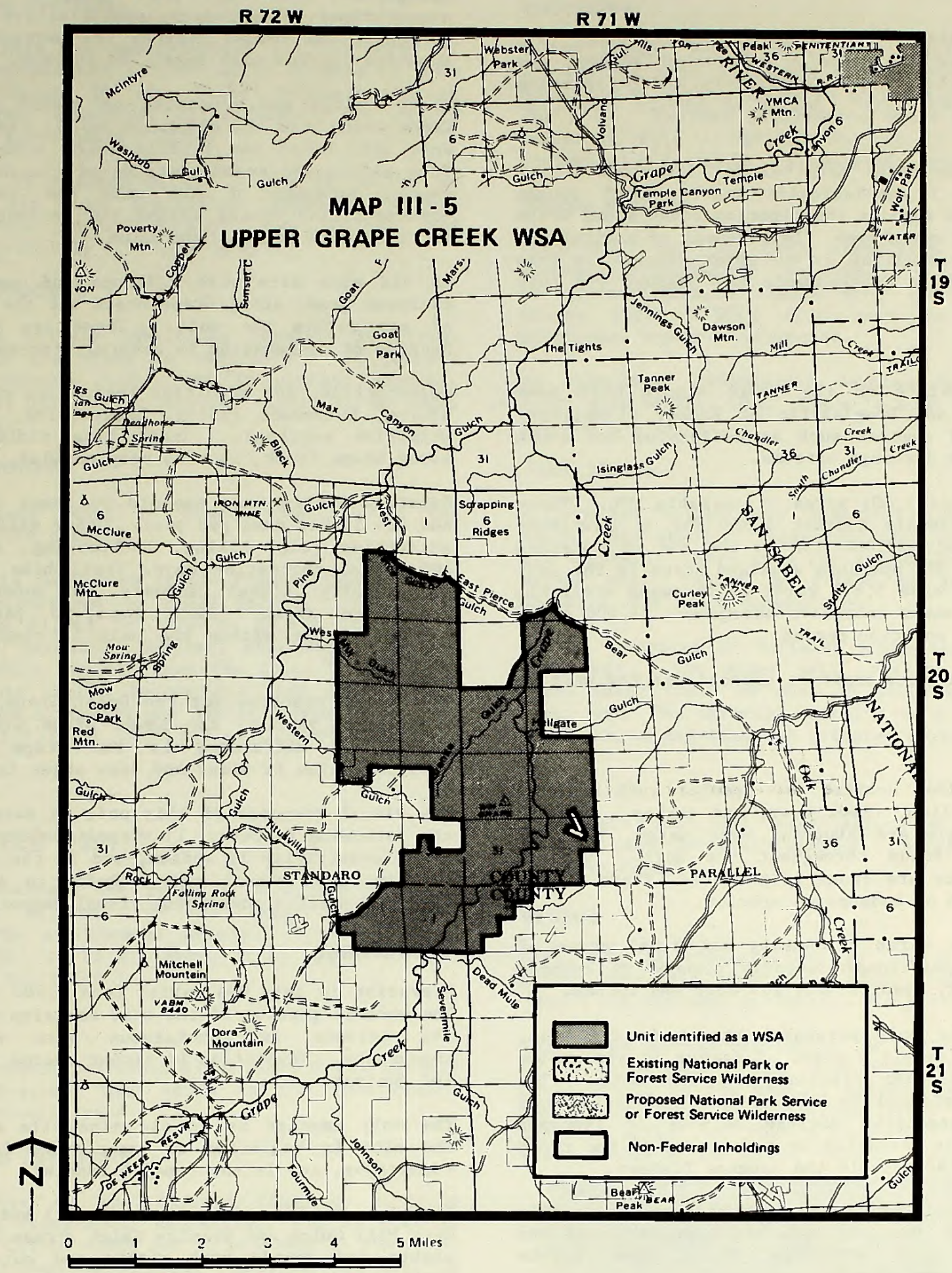

Soils

There is one soil association within this WSA: Boyle-Cathedral. Refer to Appendix B for more detail.

Water

Grape Creek meanders through portions of the study area. The unit itself contributes little runoff to the stream except in the case of flash floods. Floods originating in dry gulch tributaries of the stream can have a profound effect on Grape Creek depending on their size and duration. The floods are the result of intense rainfall falling on shallow, rock soils. Resource management in areas such as these has little effect on the frequency and magnitude of flooding.

The water quality of Grape Creek is good except during periods of flash floods when turbidity and suspended sediment are greatly increased. Otherwise, it is suitable for most common uses, including a municipal water supply.

The geology of the area consists almost entirely of metamorphic and igneous rocks. Ground water is restricted to weathered and fractured zones within these rocks. Yields to wells would probably be less than 10 gallons per minute.

Average annual sediment yield is estimated to be around 0.2 acre-foot per square mile which is considered to be a low to moderate rate.

Range

This WSA consists mainly of mountain muhly and needle-and-thread and riparian species of willows and hackberry. There is one intensively managed grazing allotment with 800 AUMs. Season of use is June 1 to November 15.

The area is considered marginal for livestock forage production but is ecologically stable. Good forage production areas such as the riparian zones along Grape Creek have been overgrazed. Improvement of habitat and forage species condition is of major concern in this unit. Three spring developments are planned for this unit.

Forestry

Pinon-juniper exists on the lower slopes with some ponderosa pine and Douglas-fir at higher elevations. Some broad leaf species such as cottonwood and aspen are found in the drainage bottoms.

The unit contains 1,003 acres of operable PFL. These 1,003 acres presently support 6,820 Mbf of sawtimber and could produce 22,066 Mbf by the end of rotation age. There are 922 operable woodland acres in the unit which presently have 5,634 cords of firewood available and could grow under intensive management 21,206 cords over a 150-year rotation period.

Intensive forest management is planned for the unit in the future.

Wildlife

This unit provides habitat for species such as mule deer, mountain lion, black bear, and turkey. Smaller birds and mammals are abundant near water, however, they are also found throughout the unit. Several species of raptor are found in the area. There are no known threatened or endangered species.

There are three water catchments and 3,565 acres of vegetation manipulations presently planned to enhance wildlife habitat, specifically for deer and turkey.

Grape Creek, the only perennial stream in the unit, provides approximately 4 miles of stream or streamside habitat (aquatic and riparian) in the unit. The habitat is considered to be in poor condition and continues to gradually decline because of improper grazing. This is resulting in a decrease of the trout fishery and an increase in the nongame fishery.

The Arkansas Canyon Habitat Management Plan covers this unit. Intensive inventory work has been completed and habitat improvement work is being done within wilderness management guidelines.

Cultural

Although no sites have been recorded in the unit it is believed that prehistoric values do occur. According to the Royal Gorge Resource Area URA prehistory, resources in this WSA are not significant. Little information exists on which to make definitive statements concerning this prehistory.

Historical development in the unit consisted of mineral prospecting, mining, railroading, agriculture and livestock grazing, and recreation use.

Recreation/Visual

At present, three recreation opportunity spectrum (ROS) categories made up this unit: semiprimitive nonmotorized (31 percent), semiprimitive motorized (58 percent), and roaded natural (11 percent). Refer to Appendix C-1 for more detail on the ROS.

Steep cliffs and mountains on either side of Grape Creek along with the mountains on all sides of East and West Mill Gulch and Granite Gulch screen those areas from sights and sounds outside of the drainages. The remote location of the unit and the absence of transportation routes around the perimeter also serve to contribute to solitude value.

An old mine site with tailings and some of the old railroad grade along Grape Creek are the only imprints of man within the unit. These are barely evident because of reclamation by natural processes.

Opportunities for primitive recreation are available - hiking, horseback riding, backpacking, fishing (in a primitive setting). Trail bike riding, especially along Grape Creek, is also very popular.

Existing hunting use amounts to about 25 hunter days and 125 fisher days per year. Other wilderness related activities (e.g. hiking, backpacking, etc.) approach 100 annual recreation days. Trail bike use and other back-country travel amounts to about 100 annual recreation days. More than 90 percent of the recreation use within the unit is concentrated along Grape Creek.

The visual resource for the Upper Grape Creek is very similar to that of the Lower Grape Creek WSA. One significant difference is the Grape Creek Canyon corridor which is wider and less sheer in this unit.

The visual resource of this unit is rated Class IV on the following factors: 1) visual quality is rated B or C; 2) sensitivity is medium; and 3) the unit lies in a "seldom seen" visual zone. Refer to Appendix D for more information concerning visual resource management.

Wilderness

Elevation in this WSA varies from 7,000 to 8,100 feet. The western portion of the unit contains rolling hills; its balance is mountainous with rugged, steep topography. Vegetation is rather sparse - mostly pinon and juniper.

The only imprint is an old mine site with tailings. The site is beginning to grow over, is screened by topography, and is not a major imprint.

The steep cliffs and mountains on all sides of East and West Mill Gulch and Granite Gulch screen this area from sights and sounds both within and outside the WSA. Cottonwood and some ponderosa pine are somewhat plentiful and provide screening especially along Grape Creek.

Opportunities for primitive and unconfined recreation have been discussed in the previous Recreation/Visual section.

The same narrow gauge railroad discussed in Lower Grape Creek WSA is also in this unit. It was constructed in 1881 along Grape Creek and abandoned in 1889. A few cut banks, rails, bridge abutments, and metal poles still remain along Grape Creek. The remains of this railroad grade is a special feature because of its historical significance.

As identified by the Baily-Kuchler Ecosystem map of ecoregions in the United States, the Upper Grape Creek

WSA is in the pine Douglas-fir forest of the Rocky Mountain Forest Province.

In Colorado there are approximately 131,300 acres of existing wilderness and 123,940 acres of WSAs in pine Douglas-fir forest of the Rocky Mountain Forest Province. This ecosystem classification is fairly common to the surrounding region.

The unit can be reached within 1 day (5 hours) of driving from six major population centers: Denver, Colorado Springs, Pueblo, Boulder, Fort Collins, and Greeley (approximately 2,400,000 people).

Realty and Access

There are two private inholdings totaling 30 acres. Adjacent lands are mixed in ownership - 54 percent Federal, 11 percent state, and 35 percent private. Physical access is limited, however, there is no legal access present.

Social/Economic

Social - Please refer to General Section at the beginning of this chapter.

Economic - This unit lies within Fremont County which has been characterized by rapid growth. Population increased from 21,942 in 1970 to 28,676 in 1980, a change of 30.7 percent. However, employment rate has been consistently greater than the state by 1 to 1.5 percent and per capita income has been consistently lower. In 1969 estimated per capita income was $2,261 (Colorado $3,106); in 1977 it was $4,909 (Colorado $6,118).

SAND CASTLE (135)

This unit contains 1,644 acres of land consisting of four parcels adjacent to the Great Sand Dunes Wilderness Area in Alamosa County. The unit lies within T. 40 N., R. 12 E., NMPM, T. 25 S., R. 73 W., 6th PM. (See Map III-6.)

Air

This unit is considered Class II by Federal Air Quality Standards. Frequent high winds in the area create considerable blowing sand.

Geology and Minerals

This unit lies on the eastern edge of a large north-trending topographic depression. It is east of the Sangre de Cristo Range and is adjacent to the Great Sand Dunes National Wilderness. Most of the land in this unit is gradually sloping alluvial fans dissected by small drainages with some exposed rock of sedimentary origin. Active sand dunes approximately 600 to 800 feet in height are in the unit.

There are no known significant minerals in this unit according to available information. As of December 31, 1981, there were no existing mining claims. There are 1,644 acres of subsurface minerals in Federal ownership.

Critical Mineral Resource Values

Some amounts of barite occur in metamorphic rocks immediately northwest of the upper unit. No evidence exists that this extends into the unit. An accurate determination would require more exploration, but the geologic and economic conditions do not warrant such activities.

A low grade, 5-foot wide iron bearing vein occurs one-quarter mile southwest of the upper unit of this WSA. There appears to be no structural extension into the unit. Further exploration would be necessary to delineate this structure, but it is not considered economically feasible for low grade iron deposits.

Energy Minerals

This unit has not been classified for geothermal resource potential by the USGS. It is 13 miles from the former Alamosa County KGRA and within the Rio Grande rift. This rift zone is favorable for geothermal resource occurence.

An unexplored sedimentary section exists below the lower unit of this WSA. There is some possibility that oil and gas exist.

Other Minerals

Well-sorted eolian sand deposits occur on the lower units. The physical characteristics or potential uses are unknown. There does not appear to be an existing market which cannot be filled by extensive nearby deposits of similar composition.

Common varieties of building stone exist in parts of this unit. The upper unit consists of metamorphic rocks which could be used in building, riprap, road base, etc. The material contains no unique properties. There are no existing nor patented markets.

Soils

There are two soil associations within this WSA: Duneland and Cotopaxi-Duneland. Refer to Appendix B for more detail.

Water

This unit is characterized by low precipitation and sandy, extremely permeable soils. Therefore, surface runoff and sediment production are practically zero.

Some large springs outcrop to the north and to the east of the study area. This is an indication that a water table exists at the contact between the sandy surface and an underlying less pervious layer. There are three artesian wells less than a quarter of a mile from the western edge of the unit. This is evidence that one or

Sand Castle

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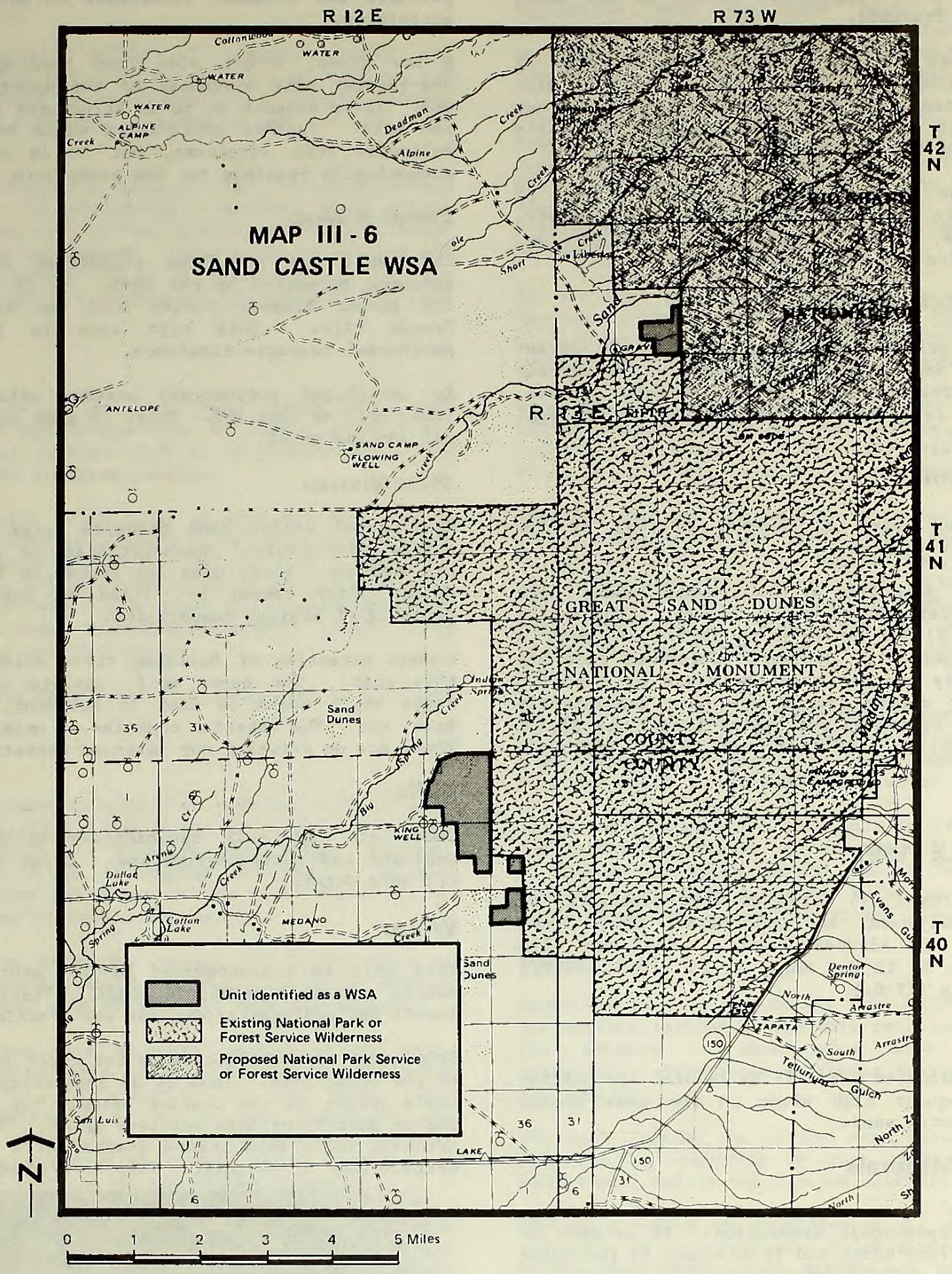

more confined aquifers lie below the water table aquifer. If wells were to be drilled in the study area they would probably be very productive.

Range

This WSA contains three nonintensively managed grazing allotments with 30 AUMs. Season of use varies depending on the allotment. They were identified as having little potential for improvement through intensive management. Vegetative range species consist mostly of sand dropseed and duneland grass with some low-growing bushes. No range improvements are presently planned for this unit.

Forestry

This unit has no operable PFL nor operable woodlands.

Wildlife

This unit has little value for wildlife. There are no known threatened or endangered species present. There is no aquatic habitat in this WSA. At present there are no wildlife habitat improvements planned.

Cultural

Although no significant sites have been recorded in this WSA it is believed that similar values to those

found in the adjacent Great Sand Dunes National Wilderness occur here. According to the prehistory discussion in the San Luis Valley Grazing EIS done in 1976 the Sand Dunes area is extremely productive from an archaeological viewpoint.

Historical development in the unit consisted of some very minimal mineral prospecting, livestock grazing, and recreation use.

Recreation/Visual

Two recreation opportunity spectrum (ROS) categories make up the unit: semiprimitive nonmotorized (80 percent) and semiprimitive motorized (20 percent). Refer to Appendix C-1 for more detail on the ROS.

The three parcels contiguous to the Great Sand Dunes Wilderness Area are continuations of the dune area. The parcel of the WSA on the northern boundary of the wilderness area is located on the foothills of the Sangre de Cristo Range.

Natural screening is not readily available within the unit. There are very few imprints of man visible either in or outside the WSA, therefore, the appearance of naturalness and the feeling of solitude enhance primitive recreation values of the unit.

Hiking, horseback riding, and photography are the primary primitive recreation opportunities of the unit. The parcels adjacent to the dunes have the characteristics to attract and sustain dune buggy activity. Present use of vehicles is very light because there are other areas nearby that are better suited for such use. Existing recreation use in the WSA (primarily back-country vehicle use on the dunes) amounts to approximately 15 annual recreation days.

The majority of the visual resource of this unit is dominated by sand dunes. The smooth form of the land and the white color of the sand are dominant features of the landscape. The northern parcel contains steep conifer covered hillsides, dissected by two intermittent drainages.

The visual resource of this unit is rated Class III based on the following factors: 1) visual quality is rated B; 2) sensitivity is high; and 3) the unit lies in a background visual zone. Refer to Appendix D for more information concerning visual resource.

Wilderness

The unit contains four parcels contiguous with the Great Sand Dunes Wilderness Area. Elevation varies from 7,700 to 9,400 feet.

These parcels are made up of sandy soils with typical low-growing dune vegetation such as Indian ricegrass and sand dropseed. The largest parcel in Secs. 2 and 11 is an active dune. The small parcel adjacent to the northern boundary is dissected by two intermittent drainages on the side slopes of the Sangre de Cristo Range.

There are two minor imprints of man. A way parallels the east perimeter of the large parcel in Sec. 2. It is a two wheel rut kept open solely by the passage of vehicles. The second imprint of man is a fence line paralleling the northern border of the wilderness area.

Basically, the vastness of the area in conjunction with the Great Sand Dunes Wilderness Area is the main factor in providing a feeling of solitude. Manmade influences (primarily roads) outside the unit can be seen.

Primitive recreation values in this unit have been previously discussed in the Recreation/Visual section.

The natural processes which created the sand dunes are considered a special feature of the area.

The majority of the wilderness values in this WSA exist because the unit is a logical extension of the Great Sand Dunes Wilderness Area and contributes to the values of the existing wilderness area.

As identified by the Baily-Kuchler Ecosystem map of ecoregions in the United States, the Sand Castle WSA is in the saltbrush greasewood (1,000 acres) and the fescue mountain muhly prairie (600 acres) vegetative category in the Rocky Mountain Forest Province.

In Colorado, there are approximately 33,000 acres of existing wilderness and 28,500 acres of WSAs in the saltbrush greasewood category. In addition to this unit there are approximately 10,000 acres of WSA and no existing wilderness areas in the fescue mountain muhly prairie category of the Rocky Mountain Forest Province.

The unit can be reached within 1 day (5 hours) of driving from four major population centers: Denver, Boulder, Colorado Springs, and Pueblo (approximately 2,100,000 people).

Realty and Access

There are four small parcels contiguous with the Great Sand Dunes Wilderness Area. There are no non-Federal inholdings within the unit. Adjacent lands are in mixed ownership - 42 percent Federal, 14 percent state, and 44 percent private. Legal access is available but physical access is limited.

Social/Economic

Social - Please refer to General Section at the beginning of this chapter.

Economic - Sand Castle lies within Alamosa County. This county, as well as the San Luis Valley, has been characterized by little population growth. Alamosa County population increased by 3.3 percent from 1970 to 1980 (11,422 to 11,799). Unemployment in Alamosa and Saguache Counties has consistently been greater than the state average by less than 1 percent, but recently exceeds the state average by 2 percent. Unemployment for the entire San Luis Valley has been at least 2 percent higher than the state average; per capita income has been lower and the gap is increasing. Alamosa County had a per capita income of $2,269 in 1969 (Colorado $3,106); in 1977 it was $4,446 (Colordo $6,118).

Income from restaurants and lodging per capita indicate that Alamosa County is less dependent on tourist economy than the state average.

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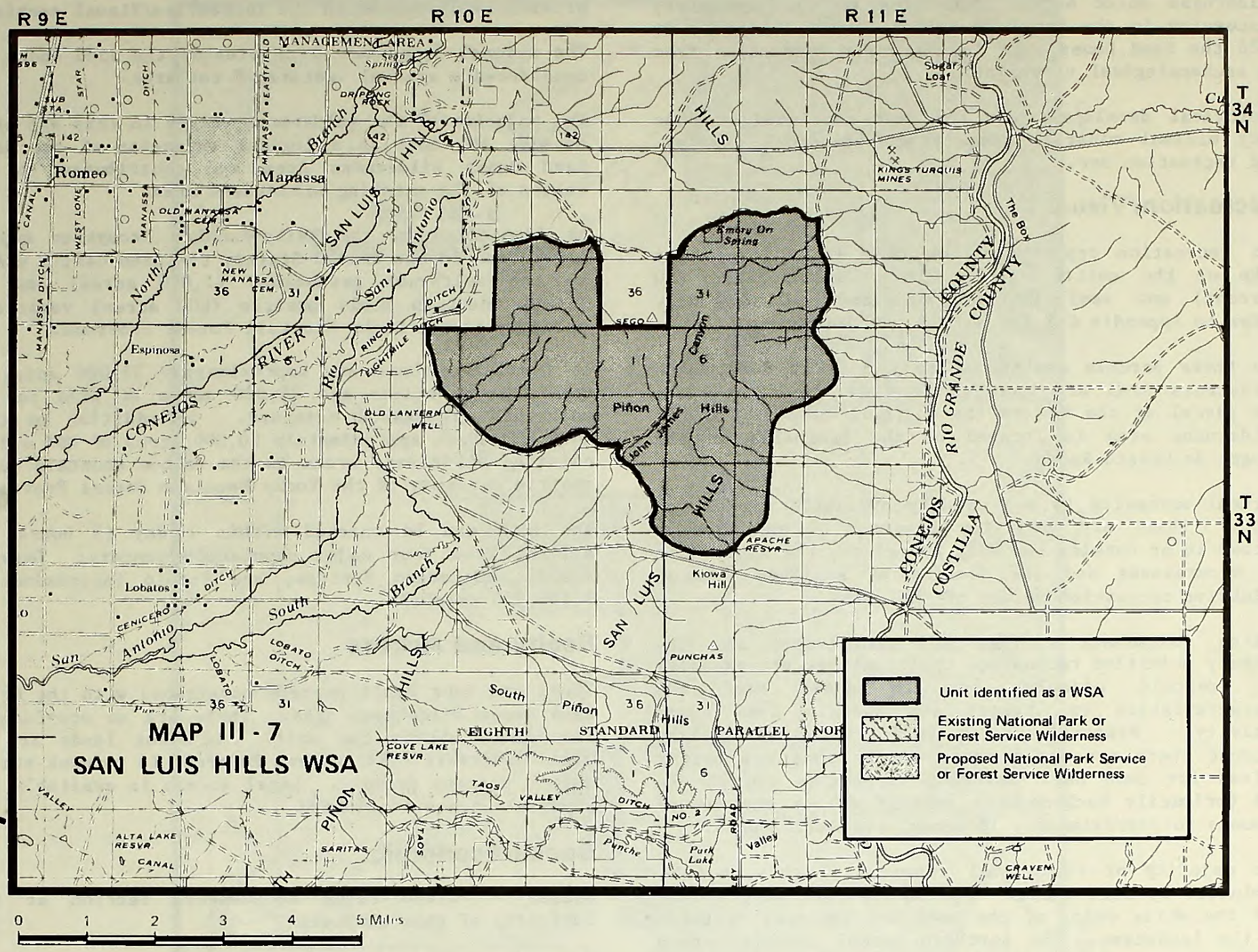


SAN LUIS HILLS (141)

This unit contains 10,240 acres of land located approximately 3 miles southeast of Manassa. The WSA lies within T. 33 N., R. 10 and 11 E., T. 34 N., R. 10 and 11 E., NMPM. (See Map III-7.)

Air

This unit is considered Class II by Federal Air Quality Standards.

Geology and Minerals

This unit is located at the confluence of two major structural trends. Ore deposits are commonly localized at such trend intersections. The structural trends involved are the Rio Grande rift and the San Juan volcanic field. The King Turquoise Mine, an intrusive center northeast of the unit, is surrounded by advanced argillic alteration. This type of alteration, apparently extending into the WSA, is often associated with base and precious metal deposits. The unit contains felsic intrusive bodies which may be related to the alteration zone. Further exploration and examination are required.

Although alteration characteristics show some province for deposition of base and precious metals, a reconnaisance geologic investigation provided no evidence of mineralization. The WSA has very limited potential for mineral exploration or development with the exception of small isolated areas. As of December 31, 1981, there were 85 existing mining claims. There are 9,600 acres of subsurface minerals in Federal ownership and 640 in non-Federal.

Critical Mineral Resource Values

The only critical mineral resource potentially available in the area is copper. Anomalous concentrations of copper are reportedly present, related to the alteration zone.

Energy Minerals

Although this area has not been classified by the USGS as a geothermal area, it is approximately 12 miles from the former Alamosa prospectively valuable area. It is less than 6 miles from reported hot springs and is within the Rio Grande rift zone which has potential but is largely unexplored. The WSA is underlain by an unexplored sedimentary section which has potential for hydrocarbon resources.

Some gas has been reported in the San Luis Valley. The existence of oil and gas in the WSA is possible but not probable.

Other Minerals

The potential for antimony, arsenic, molybdenum, gold, and silver is similar to copper which is described above. In addition there is an unsubstantiated report of silver and some gold in the northeast part of the WSA.

Anomalous concentrations of gold and silver have not been reproducible in subsequent samples. Additional exploration and assays are needed for an adequate assessment.

Soils

There is one soil association in the WSA: Travelers-Garita. Refer to Appendix B for more detail.

Water

There are no perennial streams within the boundries of this unit. It is dissected by gullies fanning out in all directions from the high ground near the center of the area. Many of the drainages eventually lead to the Rio Grande or the Rio San Antonio, but some simply end in the colluvial deposits at the base of the hills. In years with heavy snow there is a short period of snowmelt runoff. Otherwise, runoff is in the form of flash floods caused by intense rain falling on shallow, rocky soils. Only the larger floods reach live streams. Smaller flows are absorbed by channel beds and banks before they reach the streams. Sediment yield from this area is low, averaging less than 0.2 acre-foot per square mile per year.

The area has a complex volcanic geology. Ground water is present, but in limited amounts. There is one spring just outside the northern boundary of the unit. The quality of ground water in this area is generally quite good.

Range

This WSA contains two intensively managed grazing allotments with 269 AUMs. One-half is winter cattle use and one-half is fall-winter sheep. The area is considered marginal for forage production but is ecologically stable.

Range trend is static to increasing. Vegetative range species include primarily sagebrush and fourwing saltbrush on the higher elevations with blue grama, dropseed, western wheatgrass, and ricegrass on the sloping hills. There are currently no plans for range improvement projects.

Forestry

This unit contains no PFL acreage and the woodlands present are not operable.

Wildlife

At present, wildlife is scarce in the unit due to a lack of permanent water source. There are some antelope and a few mule deer in the WSA. Water catchments are the only identified wildlife improvements suggested in the MFP. There are no known threatened or endangered species. This WSA has no streams which flow year-round and therefore has no aquatic wildlife.

Cultural

Some rock-art and stone circles have been found in the general area of the unit. Although the unit has some minimal prehistoric values it is considered of minor significance.

Historical development in the unit consisted of prospecting, mining and livestock grazing.

Recreation/Visual

Two recreation opportunity spectrum (ROS) categories make up this unit: semiprimitive motorized (75 percent) and roaded natural (25 percent). Refer to Appendix C-1 for more detail on the ROS.

The diversity of topography is well suited to accommodate primitive recreation activities such as horseback riding, hiking, and backpacking. The accessibility of the unit is also well suited for four-wheel drive and trail bike activity.

Present recreational use in the San Luis Hills is light and mostly associated with the use of motorized vehicles. The unit supports about 275 annual recreation days for hunting, wood gathering, and scenic viewing.

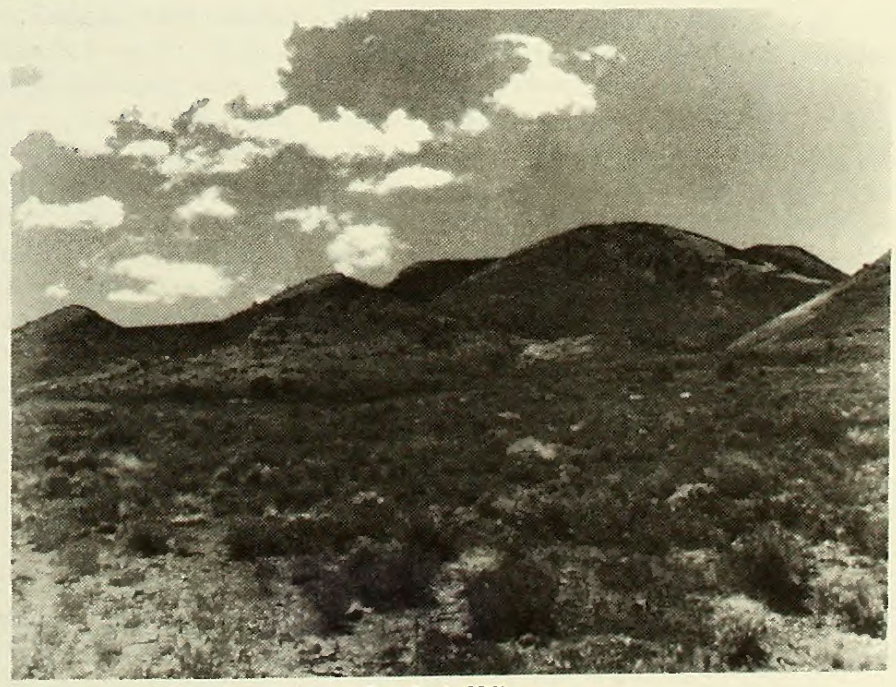
The San Luis Hills unit is characterized by rolling, interconnected hills interspersed with twisting valleys. The northern portion of the unit has some steep cliffs. The colors of the unit are rather muted, dominated by greys of the soils and light and dark greens of the scattered vegetation.

The visual resource of this unit is Class III based on the following factors: 1) visual quality is rated B; 2) sensitivity is medium; and 3) the unit lies in the foreground/middleground zone.

Wilderness

This unit, located in the southeast corner of the San Luis Valley, consists of a series of interconnected hills which rise from 7,700 feet at the surrounding valley floor to 9,300 feet at the highest point.

The unit has heavy concentrations of pinon and juniper stands scattered throughout the area. There are several imprints of man within the unit. Various ways, several small check dams, fence lines, and a mining exploration area are visible from different locations within the unit.



San Luis Hills

Twisting drainages, vegetation, and other contours screen visitors from one another within the unit. Highways and roads skirt the entire perimeter of the unit and have obvious impacts on solitude.

Primitive recreation values in this unit have been previously discussed in the Recreation/Visual section.

The unit contains no known special features.

As identified by the Baily-Kuchler Ecosystem map of ecoregions in the United States, the San Luis Hills WSA is in the fescue mountain muhly prairie classification of the Rocky Mountain Forest Province.

In Colorado, aside from this unit, there are approximately 600 acres of WSA in the fescue mountain muhly prairie classification of the Rocky Mountain Forest Province.

This unit can be reached within 1 day (5 hours) of driving from Albuquerque, New Mexico, and Pueblo, Colorado (approximately 600,000 people).

Realty and Access

There is one state inholding totaling 640 acres. Adjacent lands are mixed ownership - 70 percent Federal, 24 percent state, and 6 percent private. Physical access is primarily limited to drainages, however, legal access is unlimited.

Social/Economic

Social - There were 25 comments received stating the San Luis Hills WSA has mineral potential. Since the San Luis Valley is an economically depressed area, the majority of these comments stated an interest in increasing employment through mineral development.

Economic - San Luis Hills lies within Conejos County. The population of this county and neighboring Costilla County decreased .7 percent from 10,937 in 1970 to 10,865 in 1980. The unemployment has consistently been greater than the state by as much as 6 percent. Per capita income has been lower and the gap is increasing. Conejos and Costilla Counties had a per capita income of $1,378 in 1969 (Colorado $3,106); in 1977 it was $2,841 (Colorado $6,118).

Income from restaurants and lodging per capita indicate that these two counties have much less dependence on the tourist trade than the state average.

CHAPTER IV - ENVIRONMENTAL CONSEQUENCES

The purpose of this chapter is to describe the expected impacts and consequences of wilderness designation or nondesignation on the affected environment described in Chapter III. Each WSA is analyzed by the alternatives in Chapter II and by each of the twelve resource elements in Chapter III.

All figures used are approximate and based on the best information currently available.

ENERGY REQUIREMENTS AND CONSERVATION POTENTIAL

Implementation of any alternative would require motor vehicle and aircraft fuel for administration of the area. However, the amount would not be different for any alternative selected, and no conservation potentials are evident.

ASSUMPTIONS USED FOR IMPACT ANALYSIS

Designation or nondesignation of the seven WSAs would take place within the next 5 years.

Short-term impacts, for the purpose of this EIS, are those occurring within 5 years after designation. Long-term impacts, for the purpose of this EIS, are those occurring more than 5 years after designation.

Management actions on units not designated wilderness would be consistent with the MFP and presently applicable laws and regulations. Management of units designated wilderness would be consistent with the Wilderness Management Policy (September 1981).

BLM will have sufficient funding and workforce to implement the management actions chosen.

The following assumptions are made regarding the economic portion of this EIS:

Current values were utilized for recreation and other resources. These are not anticipated to be constant over time, but expected changes are not readily quantifiable.

The assumption is that potential hikers in wilderness areas would select the area for the wilderness characteristics and/or because it has been publicized as a wilderness area. Some of these features may be lost if a WSA is not designated wilderness. The values for the All Wilderness Designation alternative may be overstated. The extent to which these are overstated depends on how well the wilderness characteristics are preserved if the unit is not designated wilderness.

If the wilderness alternative is adopted, it is assumed that activities and investments not conforming to wilderness management would be lost. The extent to which the costs of wilderness designation are overstated depends on the number of alternative BLM sites (e.g. off-road vehicle areas) within close proximity of the WSA.

BLM administrative costs for any alternative are not considered here.

Nonuser values for preserving wilderness discounted over time have been identified in a Colorado survey (Walsh, Gillman, and Loomis). These total over $81 per acre if the assumption is made that one-half of all USFS and BLM WSAs in Colorado are designated wilderness (if less than half occurs the results are understated). Two assumptions of this survey may lead to overstatement of value:

1. Uniformity of wilderness areas

2. No one is given the option of paying for nonwilderness designation. However, this survey does give an indication of a value that is often overlooked in analysis. The results are not used in the WSA sections and are presented here as the only available survey of willingness to pay by the nonuser for wilderness areas.

GENERAL SECTION

This chapter assesses the environmental consequences of the alternatives as they apply to each WSA. The adverse, short-term/long-term, and irreversible/irretrievable impacts on each resource were considered and are discussed when appropriate.

Each resource was considered by alternative, however, there are several comments and impacts common among the units. These are:

Air - If the various WSAs are not designated wilderness, the air quality would probably not deteriorate below Class II. Concern has been expressed, particularly about the Beaver Creek unit, that air quality standards may become more stringent if this WSA becomes a wilderness area. The Department of the Interior will not recommend reclassification to the more strict Class I Air Quality classification in connection with future wilderness recommendation resulting from the BLM wilderness review. The two processes are separate and distinct and are accomplished under two different laws; FLPMA and the Clean Air Act. Recommendations for wilderness designation are made by BLM through the Secretary of the Interior and the President to Congress. Air quality reclassification is the prerogative of the states and must follow a process mandated by the Clean Air Act Amendments of 1977, involving a study of health, environmental, economic, social, and energy effects; a public hearing; and a report to the Environmental Protection Agency.

Geology and Minerals - Mineral exploration and development in units which are not designated wilderness would be in accordance with 43 CFR 3809, Surface Management of Public Lands under U.S. Mining Laws.

If a unit is designated wilderness, and there were valid existing rights as of date of designation, mineral exploration and development could occur under the provisions of 43 CFR 3809.

Any leases in effect when a WSA is designated wilderness are also considered a valid existing right. Cost of mineral exploration and development could increase under these provisions. This is discussed in greater detail in the Wilderness Management Policy (September 1981). Mineral potential of all areas recommended for wilderness designation will be further inventoried and analyzed by the U.S. Geological Survey/Bureau of Mines. The inventory results will accompany the recommendations when they are forwarded to the President and the Congress.

Soils - Impacts to soils would be the result of other resource actions permitted if the area is not designated. Impacts resulting from such a project would be addressed at the time the project is proposed in an appropriate environmental analysis.

Water - Hydrologic condition in all of the WSAs is near optimum. Impacts to water would be the result of other resource actions permitted if the area is not designated wilderness. Impacts resulting from such a project would be addressed at the time the project is proposed in an appropriate environmental analysis.

Range - Several spring developments have been identified in the MFPs. These may be more expensive to construct in an area designated wilderness due to restrictive access. Proposed spring developments would not be eliminated as a result of wilderness designation but the cost of mitigating the spring to conform with wilderness guidelines would be greater than in nondesignated areas.

Forestry - The volume figures listed for timber and woodland resources represent what would be lost as a result of a wilderness designation. The present volume as well as the total volume which could be retrieved over the entire span of rotation are listed. The rotation age volumes include 1) volume removed from the stand at 10-year intervals for projects such as thinning, pest control, removal of dead and inferior trees and 2) the volume of the mature crop of trees which would be harvested at the end of rotation age. These are maximum figures based on intensive forest management under optimum conditions for the sites involved. Rotation age for Douglas-fir is 120 years and for all other species involved, including woodlands, is 150 years.

Insect and disease outbreaks will not be artificially controlled, unless it is necessary to protect timber or other valuable resources outside of the wilderness area, or in special instances when loss to resources within a wilderness is undesirable (e.g., absence of control would threaten rare or endangered plants or animals).

Wildlife - The protection of the natural environment against manmade influences by wilderness designation is ideally suited to some wildlife species, such as raptors (including the peregrine falcon). However, wilderness designation prohibits habitat improvement projects that would convert old-age mature forests, such as pinon-juniper woodlands, to a mountain shrub-grassland type. This is preferred habitat for a large variety of wildlife species. Wilderness designation would prohibit habitat manipulation projects thereby preserving the old-age forests now existing in the unit.

A similar situation exists with fisheries habitat. Modifications and improvements of habitats are necessary to achieve maximum populations of aquatic species.

Cultural - Wilderness designation would protect cultural resources from surface disturbing activities. However, if an area is designated, more people would be attracted to the area which would increase the chance of theft and vandalism.

Impacts to cultural resources resulting from proposed resource actions/projects would be addressed in an appropriate environmental analysis.

Recreational/Visual - Recreation research studies generally substantiate that the national publicity created by wilderness designation of an area would probably attract additional recreationists. As a result, visitor days for hiking, backpacking, and related back-country activities would increase at least initially.

Wilderness designation would preserve the visual integrity of an area from disruptive activities. Any existing imprints of man would probably heal in the long term (e.g. vacated "ways" would revegetate and reclaim themselves).

The visual quality of a WSA probably would not be altered if the area is not designated unless significant mineral values are found and developed.

Wilderness - Wilderness designation would generally protect wilderness values both in the short and long term from the surface disturbing activites of back-country vehicle use, mining, and timber harvest. In addition, other related resources such as water, visual, and primitive recreation would likely be preserved.

Adequate access would be provided to state or private land completely surrounded by a wilderness area. The BLM Wilderness Management Policy identifies adequate access as ". . . the combination of routes and modes of travel which will, as determined by the BLM, cause the least lasting impact on the wilderness resource, and at the same time serve the reasonable purposes for which the State or private land is held or used." Therefore, any non-Federal inholdings within a designated area may pose manageability problems for BLM in an attempt to preserve naturalness, solitude, and special features.

Forestry, range, and wildlife have proposed pinon-juniper harvest projects in McIntyre Hills, Upper Grape Creek, and Lower Grape Creek. These projects impact wilderness values in the same acres in each unit and are assessed as one project.

With the exception of Sand Castle and San Luis Hills none of the WSAs would contribute a unique ecosystem or landform to the National Wilderness Preservation System. The vegetative classification will be discussed under Alternative A for these two units only.

More detail on diversity in the National Wilderness Preservation System can be found in the MSA which is available in the Canon City District Office.

Realty and Access - Except for providing access to non-Federal land and mining claims no realty actions would occur in areas designated wilderness as directed in the BLM Wilderness Management Policy.

Social - This resource is addressed below and applies to all WSAs. Therefore it will not be discussed as part of each unit analysis. No polls of local residents have been taken regarding approval or disapproval of wilderness designation for some or all WSAs on BLM lands in the Canon City District. The reactions that have been measured are indicated in

Chapter III Social/Economic section. National and regional public opinion polls indicate a preference for designation where appropriate. Nationally, 48 percent of the respondents thought maintaining wilderness was more important while 39 percent thought developing natural resources was more important. In addition, 52 percent vs. 37 percent said protecting the environment was important even if it meant paying more for industrial products. Regionally, 54 percent of the Rocky Mountain residents polled said it was more important to "protect the environment" than to "promote growth."

The wilderness designation decision is not expected to have major social underlying impacts (e.g. police, sewer) in any of the units. However, the decision may impact local employment if a mineral find is unable to be developed. Saguache, Conejos, and Alamosa County governments have expressed the fear that additional wilderness would result in a reduction in mineral activity which could negatively affect employment. This concern is related to San Luis Hills WSA and to a lesser extent Sand Castle.

RELATIONSHIP TO OTHER ACTIONS/PROGRAMS

In general, designation of any WSA as wilderness could be viewed as either consistent or inconsistent with county plans, policies, and programs because of conflicting goals and objectives. For this reason county comments or statements on specific study areas should be viewed as the proper interpretation of their goals and objectives.

1. For the small portion (160 acres) of Sand Castle (135) which is in Saguache County, designation would be inconsistent with most of their adopted "Policies on Intergovernmental Coordination".

2. Designation of San Luis Hills (141) in Conejos County would be inconsistent with an August 14, 1981, County Commission resolution and most of the "Policies on State and Federal Land Use Management and Intergovernmental Coordination" which were added in November 1980 to the 1977 Comprehensive Plan for Conejos County.

3. Alamosa County via statement letter of February 1, 1982, opposes designation of wilderness areas (i.e. portions of Sand Castle (135)).

4. Sand Castle (135) designation would be consistent with the Great Sand Dunes National Monument and Wilderness plans, policies, and programs.

5. Designation of Beaver Creek (016) as wilderness would be inconsistent with the objection statement of the City of Colorado Springs. It would be consistent with the two El Paso County zones of Forest and Forest/Recreation.

6. Designation of the Fremont County portions of Beaver Creek (016) and Upper Grape Creek (017) and all of Lower Grape Creek (014) and McIntyre Hills (013) would generally be consistent with the Fremont County Comprehensive Plan of 1976.

7. Chaffee County Comprehensive Plan of 1971 as revised in 1976 is generally consistent with designation of Browns Canyon (002).

8. Any designation as wilderness would be consistent with the 1981 Colorado Outdoor Recreation Plan prepared by Parks and Outdoor Recreation Division of Colorado Department of Natural Resources as long as the area is suitable.

9. Wilderness designation is consistent with the U.S. Forest Service Plans.

See Appendix E for the above referenced statements. At this time no other entity has officially and specifically addressed consistency of wilderness designation with their plans, policies, or programs.

EXPLANATION OF CHARTS

All resource elements are analyzed in the narrative, however, identified impacts are also shown on the chart. Through this chart impacts are described in a concise, standard method for each resource element on the chart. The information is read as a sentence from left to right, with a subject (management action), verb (increases or decreases), an object (affected resource), and modifiers (estimated quantity, units, and period of impact). Thus, a management action will increase or decrease an affected resource by x amount of units for x length of time. See samples.

Presenting impacts in the format of a simple declarative sentence mirrors the thought process necessary for environmental analysis and helps both the analyst and the reader focus first on the impact (affect) of an action and second on the meaning (consequences) of the impact. Interdisciplinary analysis is enhanced because individuals can more easily relate impacts identified by others to their own area of concern. The impacts of an action can then be traced and secondary impacts and their consequences identified. This format hopefully eliminates nonessential discussions and vague qualitative analysis. Data gaps, lack of quantification, and uncertainties are readily identified.

Management Action	Increases or Decreases	Affected Resource	Estimated Quantity	Units	Period of Impact
Subject	Verb	Object	----------Modifiers----------		

To fully understand the environmental consequences presented in this chapter, it is essential to use the worksheets. The sample below is shown with simulated facts and figures for further clarification.

Note: Figures shown in parentheses () on the worksheet signify the loss of a potential increase due to wilderness restrictions on planned resource management projects. These figures do not indicate a direct loss. The symbol < in the economic charts indicates "less than."

SAMPLE

Management	Increases or Decreases	Affected Resource	Estimated Quantity	Units	Period of Impact
Restrictions on development of 1 water catchment (wildlife project)	Decrease	Mule deer	(15)	Animals	Long-term

The following is the way the above chart would read in sentence form:

Restrictions on development of one water catchment decreases the potential gain of mule deer by 15 animals in the long term.

UNIT BY UNIT ANALYSIS

Each unit is individually assessed by resource for impacts resulting from wilderness designation or nondesignation.

BROWNS CANYON (002)

Alternative A

All Wilderness Designation (Preferred Alternative).

Acres recommended for designation - 6,614

Air

See General Section at the beginning of this chapter.

Geology and Minerals

This unit contains no known mineral deposits and only limited potential for the discovery of significant new deposits. Consequently a wilderness designation would have little or no impact on mineral development. See General Section at beginning of this chapter and Chapter III - Affected Environment. Although the unit lies in a possible geothermal resource area this specific unit does not possess any known potential.

Soils

See General Section at the beginning of this chapter and Appendix B.

Water

See General Section at the beginning of this chapter.

Range

Wilderness designation would not significantly impact range. It would, however, prohibit forest management which has some secondary impact on range resources. Specifically browse/grass production would not increase if the timber were not harvested.

Management Action	Increases or Decreases	Affected Resource	Estimated Quantity	Units	Period of Impact
Reatrictiona on management of 3,910 acrea of woodland and 65 acras PFL (forestry project)	Decrease	Liveatock grazing	(150)	AUMs/ year	Long term

Figures in () signify a loss of potential increase due to wilderness management reatrictions on planned resource management projects. Thase figures do not indicate a diract loss.

Forestry

Designation would not impact timber harvest in the short term. Cordwood and sawlog harvest is planned within 10 to 20 years; wilderness designation would prohibit this harvest. Also refer to General Section.

Management Action	Increases or Decreases	Affected Resource	Estimated Quantity	Unita	Period of Impact
Reatrictions on management of 3,910 acres of operable woodland	Decrease	Available firewood	10,752	Cords	Long term
	Decrease	Potential firewood	89,930	Cords	Long term
Restrictions on management of 65 operable acres of PFL	Decrease	Available sawtimber	416	Mbf	Long term
	Decrease	Potential sawtimber	1,560	Mbf	Long term

Wildlife

Wilderness designation would not significantly impact these resources in Browns Canyon in the short term. Planned wildlife projects, including five spring developments, would be compatible with wilderness management. In the long term, however, several forestry projects with beneficial effects on wildlife would be prohibited. Implementation of timber management would result in more available browse and grass for wildlife use. These projects are important for improved wildlife management.

Management Action	Increases or Decreases	Affected Resource	Estimated Quantity	Units	Period of Impact
Restrictions on management of 3,910 operable acres of woodland and 65 operable acres of PFL	Decrease	Mule deer use	(5)	Animals	Long term
	Decrease	Bighorn sheep use	(20)	Animals	Long term

Figures in () signify a loss of potential increase due to wilderness management restrictions on planned resource management projects. These figurea do not indicate a direct loss.

Cultural

See General Section at beginning of this chapter.

Recreation/Visual

If this WSA is designated wilderness, recreation four-wheel drive and motorcycle travel north of Middle Cottonwood Creek would be prohibited. This would result in minor losses for both existing and potential use. Wilderness designation for the balance of the WSA would be compatible with future recreation management objectives.

Also refer to General Section at the beginning of this chapter.

Management Action	Increaaes or Decreaaes	Affacted Resource	Estimated Quantity	Unita	Period of Impact
Restrictions on motorized vehicle use on 3,500 acres	Dacraaaa	4WD and motorcycle use north of Middle Cottonwood Craek	100	Annual recraation days	Short and long term
Publicizing the area through designation	Incraases	Hiking, backpacking, photography, etc.	100	Annual recreation days	Short and long tarm

Wilderness

If this unit is designated wilderness, naturalness, opportunities for primitive and unconfined recreation, and solitude would be preserved.

Designation of these lands as wilderness would provide long-term benefits by preserving land to permit the natural ecologic processes to continue with little or no disturbance from man's activities.

This unit is within a 5-hour drive of six major population centers totaling approximately 2,400,000 people. Geographically this unit is near several existing wilderness areas managed by the USFS. Although none of these wilderness areas are in the region (Royal Gorge Resource Area) they are within a 3-hour drive.

Realty/Access

Restrictive access due to wilderness designation could impact 17 mining claims. See Geology and Minerals in general section at the beginning of this chapter concerning access rights of mining claimants.

Social/Economic

Social - Please refer to General Section at the beginning of this chapter.

Economic - The short- and long-term impacts on local employment and income conditions would be negligible. An additional annual mineral extraction of more than $11,000,000 would be necessary to significantly affect Chaffee County employment. It is highly unlikely that a find of this proportion will occur.

Gains to wilderness users are estimated at $72,000. Total losses if designation occurs, including possible timber sales and lost wildlife projects, are estimated to be less than approximately $150,000.

Management Action	Increases or Dacreasaa	Affactad Rasource	Estimated Quantity	Unita	Pariod of Impact
Local and Regional					
Wilderness uae	Increasas	Local employment	<1	Paopla/ year	Long tarm
	Increasas	Local income	<5,000	Dollara/ year	Long tarm
Lossea of:					
Harvestable timber and firewood	Decrease	Local employment	(<1)	People/ year	Long term
	Decreasa	Local income	(<8,000)	Dollars/ year	Long tarm
Potential hunter daya	Decraase	Local employment	(<1)	People/ year	Long term
	Decrease	Local income	(<1,000)	Dollara/ year	Long tarm
Potential AUMs	Decrease	Local employment	(<1)	Peopla/ year	Long term
	Decraasa	Local income	(<2,000)	Dollars/ year	Long term
National					
Wilderness use	Incresses	Net value to users	<72,000	Dollars	Long term
Losses of:					
Current back-country vehicle use	Decrease	Net value to ORV users	<25,000	Dollars	Long term
Harvestable timber and firewood	Decrease	Net value consumers & producers	<10,000	Dollars	Long term
Potential AUMs	Decrease	Net value to producers & government	(<9,000)	Dollars	Long term
Hunter days	Decrease	Net consumer benefits	(<16,000)	Dollars	Long term

Figures in () signify a loss of potential increase due to wilderness management restrictions on planned resource management projects. These figures do not indicate a direct loss.

Alternative B

No Wilderness Designation (No Action)

Acres recommended for designation - 0

Air

See General Section at the beginning of this chapter.

Geology and Minerals

There are no impacts anticipated at this time since there is little known potential for mineral development. See General Section at the beginning of this chapter.

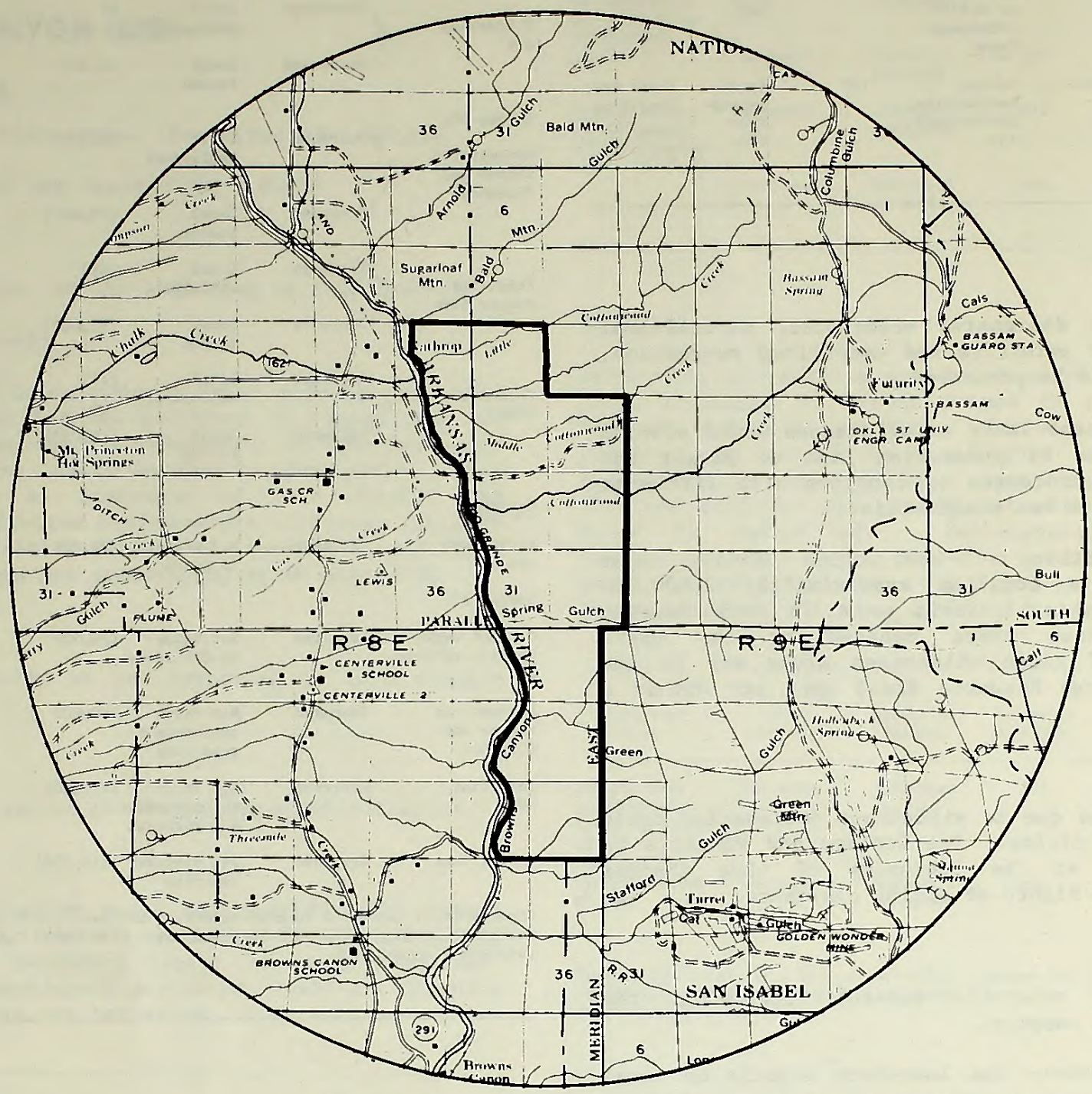
Soils

See General Section at the beginning of this chapter and Appendix B.

Water

See General Section at the beginning of this chapter.

MAP IV - 1
BROWNS CANYON - ALTERNATIVE C



Range

The forestry project in Alternative A would be permitted. This timber harvest would have a secondary beneficial effect on range.

Forestry

The firewood and sawtimber identified in Alternative A would be harvested probably within 10 to 20 years.

Wildlife

The woodland harvest prohibited in Alternative A would be permitted. This forestry project would increase browse and grass for wildlife use.

Cultural

No impacts.

Recreation/Visual

Existing use patterns for this unit would continue. Pending additional management analysis and decisions, lands north of Middle Cottonwood Creek would be managed according to semiprimitive motorized objectives. The old mining road through the WSA to the ghost town of Turret, legally closed in 1976, could possibly be reopened. The balance of the area would be managed according to semiprimitive nonmotorized criteria.

Wilderness

These values, south of Spring Gulch, identified throughout the inventory process would not be disrupted due to rugged terrain, absence of proposed projects, and the unlikely possibility of finding economically exploitable minerals. Vehicles would probably be permitted north of Middle Cottonwood Creek if the area is not designated. In addition both firewood and sawtimber would be harvested north of Spring Gulch. On areas where this occurs, naturalness, solitude, and primitive recreational values would be disrupted on approximately 50 percent of this unit.

Realty/Access

No impacts.

Social/Economic

Social - Please refer to the General Section at the beginning of this chapter.

Economic - Only those values identified as net gains due to wilderness designation (Alternative A) would not be realized if this alternative were adopted.

Alternative C

Partial Wilderness Designation - I

No boundary changes/modifications were feasible for this WSA. See Chapter II for rationale supporting this conclusion.

Alternative D

Partial Wilderness Designation - II

No second boundary changes/modifications were feasible for this WSA. See Chapter II for rationale supporting this conclusion.

McINTYRE HILLS (013)

Alternative A - All Wilderness Designation

Acres Recommended for Designation - 16,800

Air

See General Section at the beginning of this chapter.

Geology and Minerals

This unit contains no known mineral deposits and only limited potential for the discovery of significant new deposits. Consequently a wilderness designation would have little or no impact on mineral development. See General Section at the beginning of this chapter.

Soils

Impacts are negligible. See General Section at the beginning of this chapter and Appendix B.

Water

Impacts are negligible. See General Section at the beginning of this chapter.

Range

A pinon-juniper thinning project which would increase available AUMs by 11 percent within the unit would be prohibited. Additionally, a wildlife oakbrush burn project, which would have an indirect beneficial impact on range by increasing browse and grass production, would be prohibited.

Management Action	Increases or Decreases	Affected Resource	Estimated Quantity	Units	Period of Impact
Restrictions on thinning 1,120 acres of P/J on 2 sites	Decrease	Livestock	(80)	AUMs/ year	Long term
Restrictions on oakbrush burn on 100 acres (wild-life project)	Decrease	Livestock	(40)	AUMs year	Long term

Figures in () signify a loss of potential increase due to wilderness management restrictions on planned resource management projects. These figures do not indicate a direct loss.

Forestry

Designation would eliminate the harvesting of firewood and sawtimber to be implemented in 5 to 10 years and sawtimber at rotation ages. The woodlands resource in this unit is considered more valuable than in other WSAs because of the high present volume per acre. See General Section at the beginning of this chapter.

Management Action	Increases or Decreases	Affected Resource	Estimated Quantity	Units	Period of Impact
Restrictions on management of 1,190 operable acres of wood-land	Decrease	Available firewood	7,735	Cords	Short and long term
	Decrease	Potential firewood	27,370	Cords	Long term
Restrictions on management of 571 operable acres of PFL	Decrease	Available sawtimber	1,645	Mbf	Short and long term
	Decrease	Potential sawtimber	5,332	Mbf	Long term

Wildlife

Wilderness designation would have significant short- and long-term impacts on improving wildlife habitat. Planned wildlife projects, including water catchments to increase water availability, pinon-juniper manipulation to provide spring forage for deer and sheep, and oakbrush burning to increase browse and grass production would be prohibited. Additionally, range and forestry projects which would create more browse and grass for deer and turkey would be cancelled. These projects are essential for improving habitat for mule deer and wild turkey in the McIntyre Hills area.

Management Action	Increases or Decreases	Affected Resource	Estimated Quantity	Units	Period of Impact
Reatrictiona on devalopmant of 3 water catchments	Decrease	Mule deer use	(25)	Animals	Short and long term
Restrictiona on 500 acres of P/J manipulation	Decrease	Bighorn sheep use	(15)	Animals	Short and long term
Restrictions on 100 acres of oakbrush burn	Decrease	Mule deer use	(15)	Animals	Short and long term
Restrictions on thinning of 1,120 acres (range project)	Decrease	Mule deer use	(50)	Animals	Long term
	Decrease	Turkey use	(25)	Birds	Long term
Restrictions on management of 1,190 operable acres of woodland and 571 operable acres PFL	Decrease	Mule deer use	(50)	Animals	Long term
	Decrease	Turkey use	(25)	Birds	Long term

Figures in () signify a loss of potential increase due to wilderness management restrictions on planned resource management projects. These figures do not indicate a direct loss.

Cultural

No impacts are identified under this alternative. See General Section at the beginning of this chapter.

Recreation/Visual

There would be some slight impacts on hunter use by designation due to restricted motorized vehicle access. See General Section at the beginning of this chapter.

Management Action	Increases or Decreasea	Affected Resource	Estimated Quantity	Units	Period of Impact
Reatrictions on motorized vahicle use	Decrease	Hunters (big game)	15	Huntar days/ year	Short and long term
Publicizing the unit through designation	Increasea	Hiking and backpacking	60	Annual recreation daya	Short and long term

Wilderness

If this unit is designated wilderness, the planned projects in range (pinon-juniper thinning) and forestry (firewood and sawtimber harvest) would not be permitted. Therefore, soil and water resources would not be disturbed by these projects which are planned on 11 percent of the unit.

This alternative would preserve the naturalness, outstanding opportunities for primitive and unconfined recreation, and solitude in the short and long term by providing additional protection to the unit.

This unit is within a 5-hour drive from six major population centers and 2,400,000 people. Within the region there are five WSAs managed by BLM; two U.S. Forest Service WSAs, and one existing USFS wilderness area. Designation of a WSA as wilderness would add to the geographic distribution of wilderness areas in the region.

Realty/Access

Restrictive access could impact 410 acres of non-Federal inholdings and 85 mining claims as a result of wilderness restrictions. See Geology and Minerals in General Section at the beginning of this chapter concerning access rights of mining claimants.

Social/Economic

Social - Please refer to General Section at the beginning of this chapter.

Economic - The impact of designation under this alternative on local employment and income would be negligible. An additional annual mineral extraction of more than $22,000,000 would be necessary to significantly affect Fremont County employment. It is highly unlikely that a find of this proportion will occur.

Gains to wilderness unit users would approximate $50,000. Total losses if designation occurs, mainly to wildlife, ORV users, range, and forestry, are estimated at less than $240,000.

Management Action	Increases or Decreasea	Affected Resource	Estimatad Quantity	Unita	Period of Impact
Local & Regional					
Wilderness use	Increasea	Local employment	<1	People/ year	Long term
	Increasas	Local income	<5,000	Dollars/ year	Long term
Losses of:					
Harvestable timber	Decrease	Local employment	(<1)	People/ year	Long tarm
	Decrease	Local income	(<3,000)	Dollars/ year	Long term
Hunter and back-country vehicle use	Decrease	Local employment	<1	Paople/ year	Long term
	Decrease	Local income	<4,000	Dollara/ year	Long term
Potenital AUMs	Decrease	Local employment	(<1)	People/ year	Long term
	Decrease	Local income	(<1,000)	Dollars/ year	Long term
National					
Wilderness use	Increases	Nat value to user	<50,000	Dollars	Long term
Losses of:					
Back-country vehicle use	Decraase	Net value to user	<10,000	Dollars	Long term
Harvestable timber	Decrease	Net value to producer	(<65,000)	Dollars	Long term
Vehicle access restricting hunting opportunities plus increased wildlife project costs	Decrease	Net value to users & producer	(<85,000)	Dollars	Long term
Potential AUMs	Decrease	Net value to producer	(<15,000)	Dollars	Long term

Figures in () signify a loss of potential increase due to wilderness management restrictions on planned resource management projects. These figures do not indicate a direct loss.

Alternative B

- No Wilderness Designation (No Action) (Preferred Alternative)

Areas recommended for designation - 0

Air

See General Section at the beginning of this chapter.

Geology and Minerals

Nondesignation would provide the possibility of mineral exploration within the unit under the guidance provided in the MFP and under 3809 regulations. See General Section at the beginning of this chapter.

Soils

See General Section at the beginning of this chapter and Appendix B.

Water

See General Section at the beginning of this chapter.

Range

The projects and corresponding long-term benefits identified as lost by wilderness designation (Alternative A) would be permitted. These projects include pinon-juniper thinning and a wildlife oakbrush burn project.

Forestry

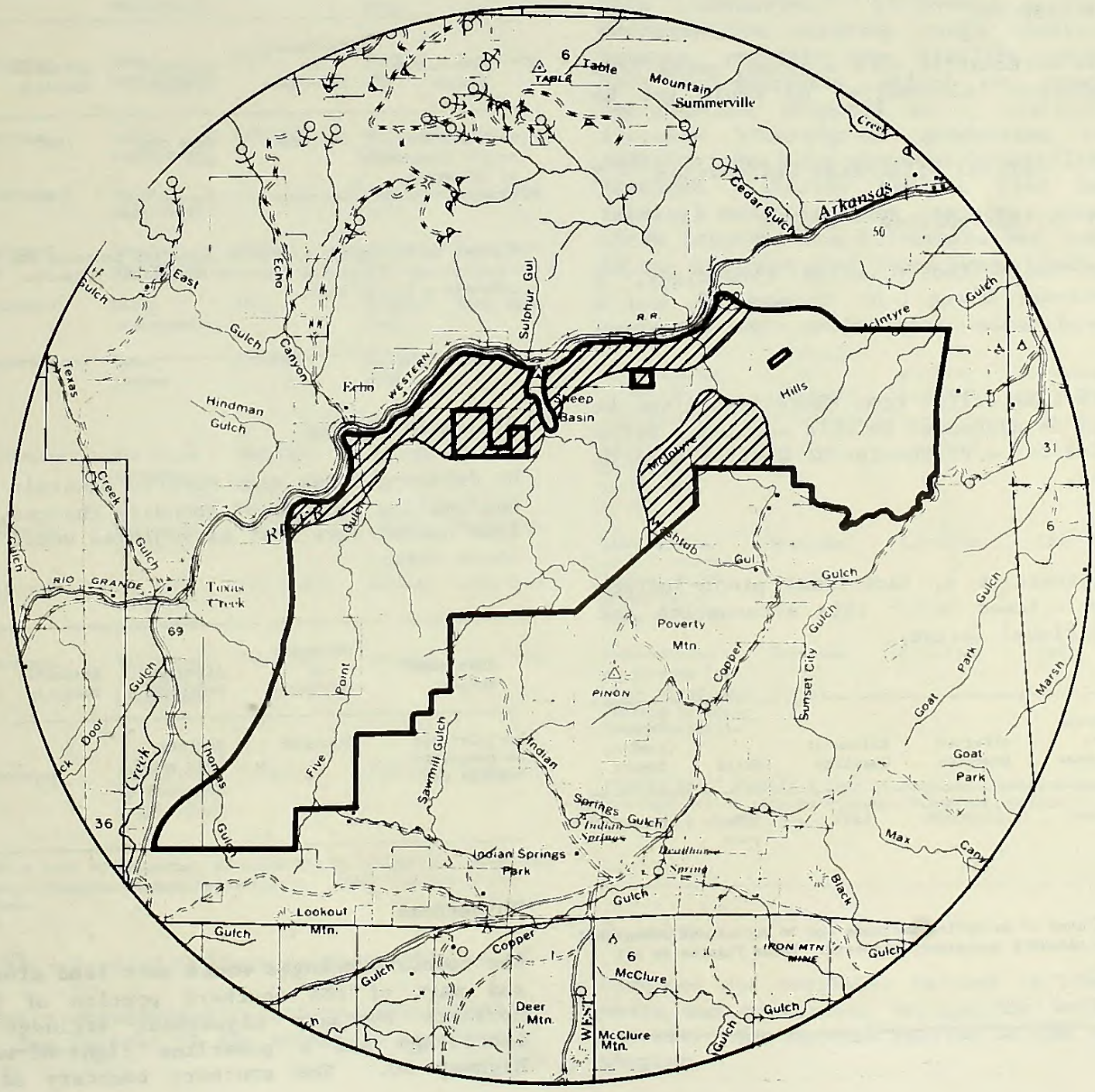
The available firewood and sawtimber that could not be cut because of wilderness designation (Alternative A) would be harvested under this alternative probably within 5 to 10 years.

Wildlife

The planned projects consisting of water catchments,

MAP IV - 2
McINTYRE HILLS - ALTERNATIVE C

PORTIONS DELETED FROM WILDERNESS RECOMMENDATION



pinon-juniper manipulation, and oakbrush burning within the unit would proceed as scheduled. The range (pinon-juniper thinning) and forest harvest projects benefiting wildlife resources would also be accomplished and corresponding short- and long-term benefits to mule deer, bighorn sheep, and turkey from all these planned projects would occur.

Cultural

See General Section at the beginning of this chapter.

Recreation/Visual

No impacts.

Wilderness

The projects/uses in range (pinon-juniper thinning), recreation (back-country vehicle use), and forestry (firewood harvest) planned in this unit would occur. These would impact solitude, naturalness, and primitive recreational values in the long term on approximately 11 percent of this unit. Wilderness values would be preserved on the remainder of the unit.

Realty/Access

No impacts would result if unit is not designated wilderness.

Social/Economic

Social - Please refer to General Section at the beginning of this chapter.

Economic - If this alternative were adopted, gains from wilderness designation (Alternative A) would not be realized.

Alternative C - Partial Wilderness Designation - I

Acres recommended for designation - 15,200

This alternative omits two patented inholdings, a powerline right-of-way along U.S. Highway 50, and a potential firewood sale area along the southern boundary.

Only those impacts that differ from those identified in Alternative A will be addressed in this section. Refer to that alternative for a discussion of similar impacts on other resources.

Range

Compared with Alternative A, additional pinon-juniper cutting would be allowed under this alternative and would provide additional forage.

Management Action	Increases or Decreases	Affected Resource	Estimated Quantity	Units	Period of Impact
Restrictions on 920 acres of P/J thinning on 2 sites.	Decrease	Livestock	(66)	AUMs/ year	Long term

Figures in () signify a loss of potential increase due to wilderness management restrictions on planned resource management projects. These figures do not indicate a direct loss.

Forestry

The area in the vicinity of Poverty Mountain containing most of the operable woodland acres would be omitted by boundary changes in this alternative. The purpose of this alternative is to reduce the forestry resource conflict.

Management Action	Increases or Decreases	Affected Resource	Estimated Quantity	Units	Period of Impact
Restrictions on management of 706 operable acres of woodland	Decrease	Available firewood	4,589	Cords	Short and long term
	Decrease	Potential firewood	12,238	Cords	Long term
Restrictions on management of 515 operable acres of PFL	Decrease	Available sawtimber	1,483	Mbf	Short and long term
	Decrease	Potential sawtimber	4,810	Mbf	Long term

Wildlife

Impacts are the same as Alternative A except for reduction in acres of a range pinon-juniper thinning project as a result of boundary modifications. The reduced acreage still represents an impact to mule deer and turkey through loss of new browse and grass in the area of the planned thinning project.

Management Action	Increases or Decreases	Affected Resource	Estimated Quantity	Units	Period of Impact
Restrictions on P/J thinning of 920 acres (range project)	Decrease	Mule deer use	(50)	Animals	Long term
	Decrease	Turkey use	(25)	Birds	Long term

Figures in () signify a loss of potential increase due to wilderness management restrictions on planned resource management projects. These figures do not indicate a direct loss.

Recreation/Visual

By deleting lands near Poverty Mountain from wilderness designation because of boundary changes, there would be less hunter days lost as vehicles would be permitted in these areas.

Management Action	Increases or Decreases	Affected Resource	Estimated Quantity	Units	Period of Impact
Restrictions on motorized vehicle use	Decrease	Hunters (big game)	3	Hunter days/ year	Short and long term

Wilderness

The boundary changes would omit land along the northern and part of the southern portion of the WSA. The northern boundary adjustment excludes two patented inholdings and a powerline right-of-way along U.S. Highway 50. The southern boundary adjustment omits

1,680 acres on which projects are planned for range (pinon-juniper thinning) and forestry (firewood and sawtimber harvest). Naturalness, solitude, and opportunities for primtive types of recreation would be lost on these lands, however, would be preserved on the remaining acreage.

Realty/Access

There are no impacts as the 410 acres of non-Federal inholdings have been excluded by boundary changes in this partial wilderness designation alternative.

Social/Economic

Economic - Wilderness designation would impact local employment and income very little. An additional annual mineral extraction of almost $28,300,000 would be necessary to significantly affect Fremont County employment. It is highly unlikely that a find of this proportion will occur.

Gains to wilderness users are estimated at less than $50,000 if designation occurs. Total losses are estimated to be less than $171,000.

Management Action	Increases or Decreaaea	Affacted Reaource	Eatimatad Quantity	Unita	Period of Impact
Local & Regional					
Wildarnaas uaa	Increaaaa	Local employment	<1	People/ year	Long term
	Incraaaea	Local employment	<5,000	Dollara/ year	Long term
Losaea of:					
Harvestable timber and firewood	Decrease	Local employment	(<1)	People/ year	Long term
	Decreaae	Local employment	(<9,000)	Dollara/ year	Long term
Hunter and back-country vehicle uae	Dacraase	Local employment	<1	Paople/ year	Long term
	Decreaae	Local employment	<4,000	Dollars/ year	Long term
Potential AUMs	Decrease	Local employment	(<1)	People/ year	Long term
	Decreaae	Local income	(<1,000)	Dollara/ year	Long term
National					
Wilderness use	Increases	Net value to users	<50,000	Dollars	Long term
Losses of:					
Back-country vehicle use	Decrease	Net value to users	<10,000	Dollars	Long term
Harvestable timber and firewood	Decrease	Net value to users & producers	(<117,000)	Dollars	Long term
Hunting opportunities plus increased wildlife project costs	Decrease	Net value to users & producers	(<96,000)	Dollars	Long term
Potential AUMs	Decrease	Net value to producers & government	(<15,000)	Dollars	Long term

Figures in () signify a loss of potential increase due to wilderness management restrictions on planned resource management projects. These figures do not indicate a direct loss.

Alternative D - Partial Wilderness Designation - II

No second boundary changes/modifications were feasible for this WSA. See Chapter II for rationale supporting this conclusion.

LOWER GRAPE CREEK (014)

Alternative A - All Wilderness Designation

Acres recommended for designation - 11,220

Air

See General Section at the beginning of this chapter.

Geology and Minerals

There is a favorable zone for base and precious metal exploration and possible development within the unit. An interest in mineral potential has been expressed throughout the inventory process. Designation would not necessarily prohibit the development of these base and precious metals. See General Section at the beginning of this chapter for explanation of mineral development rights.

Soils

Impacts to soils are negligible. See General Section at the beginning of this chapter and Appendix B.

Water

Impacts to water are negligible. See General Section at the beginning of this chapter.

Range

Range projects with potential of increasing available AUMs in the unit by 26 percent would be prevented under this alternative. Wilderness designation would not decrease the existing range condition. It would, however, prohibit some wildlife projects which would have a secondary effect on range. Vegetative manipulation proposed as a wildlife project would increase browse/grass production for range. In addition, projects proposed by wildlife specialists to increase fisheries habitat (log dams, wings, and fencing) would increase range resources. Specifically these projects would increase key range grass species in the riparian area along Grape Creek.

Management Action	Increases or Decreases	Affected Resource	Estimated Quantity	Units	Period of Impact
Restrictions on thinning 1,160 acres of P/J	Decrease	Livestock	(60)	AUMs/ year	Long term
Restrictions on P/J manipulation of 500 acres (wildlife project)	Decrease	Livestock	(30)	AUMs/ year	Long term
Restrictions on placing log dams, wings, and fencing in Grape Creek (wildlife project)	Decrease	Livestock	(20)	AUMs/ year	Long term

Figures in () signify a loss of potential increase due to wilderness management restrictions on planned resource management projects. These figures do not indicate a direct loss.

Forestry

Cordwood and sawtimber harvest is scheduled within 10 years and wilderness designation would prohibit this harvest. See General Section at the beginning of this chapter.

Management Action	Increases or Decreases	Affected Resource	Estimated Quantity	Units	Period of Impact
Restrictions on woodland management of 1,910 operable acres	Decrease	Available firewood	12,085	Cords	Short and long term
	Decrease	Potential firewood	43,930	Cords	Long term
Restrictions on management of 389 operable acres of PFL	Decrease	Available sawtimber	2,527	Mbf	Short and long term
	Decrease	Potential sawtimber	8,558	Mbf	Long term

Wildlife

Wilderness designation would have significant, short- and long-term impacts on improvement of terrestrial wildlife resources. Planned wildlife improvement projects, including water catchments which would increase water availability and harvesting pinon/juniper resulting in new browse and grass, would be prohibited. All of these projects and their beneficial effects on terrestrial wildlife habitat are important to improving existing wildlife populations in the Lower Grape Creek area.

Aquatic wildlife resources would also be significantly affected in the short and long term through wilderness designation. Planned aquatic habitat improvement projects, such as the construction of log dams and log wings, using heavy machinery, and fencing would be prohibited. Construction of these stream projects without heavy equipment would not be feasible due to the remote location and rugged topography. Without these projects, the quantity of game fish would decrease and nongame fish would increase.

Management Action	Increases or Decreases	Affected Resource	Estimated Quantity	Units	Period of Impact
Reatrictions on development of 3 water catchmenta	Decrease	Mule deer use	(20)	Animala	Short and long term
	Decrease	Turkey use	(40)	Birds	Short and long term
Restrictions on vegetative manipulation of 500 acres P/J	Decrease	Mule deer use	(50)	Animals	Short and long term
Restrictions on thinning 1,160 acres of P/J (range project)	Decrease	Mule deer use	(50)	Animals	Long term
Restrictions on management of 1,910 acres of woodland and 389 acres of PFL (forestry project)	Decrease	Mule deer use	(50)	Animals	Long term
Restrictions on development of log dams, wings, and fencing on Grape Creek for aquatic habitat improvement	Decrease	Current game fish use	10	Pounds/ acre	Short and long term
	Decrease	Game fish use	(50)	Pounds/ acre	Short and long term
Restrictions on development of log dams, wings, and fencing on Grape Creek for aquatic habitat improvement	Increase	Nongame fish use	10	Pounds/ acre	Short and long term

Figures in () signify a loss of potential increase due to wilderness management reatrictions on planned resource management projects. These figures do not indicate a direct losa.

Cultural

No impacts are identified under this alternative. See General Section at the beginning of this chapter.

Recreation/Visual

Existing trail bike use in this unit is primarily concentrated in the vicinity of the confluence of Bear Gulch and Grape Creek, and south of Temple Canyon road. The loss shown on the chart in parentheses for trail bike use would occur assuming management of the entire Grape Creek corridor would allow motorized vehicles, thus encouraging trail bike use.

Management Action	Increases or Decreases	Affected Resource	Estimated Quantity	Units	Period of Impact
Restrictions on motorized vehicle use	Decrease	Trail bike and other back-country vehicle travel	100	Annual recreation days	Short and long term
	Decrease	Trail bike use	(133)	Annual recreation days	Long tarm
Restrictions on motorized vehicle use	Decrease	Hunting	10	Annual hunter days	Short and long term
	Decrease	Fishing	10	Annual anglar days	Short and long term
Restrictions on development of fishery improvement projects (wildlife project)	Decrease	Fishing	(20)	Annual recreation days	Long term
Publicizing area through designation	Increases	Fishing, hunting, backpacking, etc.	110	Annual recreation days	Short and long term

Figures in () aignify a loss of potential increase due to wilderness management restrictions on planned resource management projecta. These figures do not indicate a direct loss.

Wilderness

Wilderness designation of this WSA would have a beneficial impact by providing both short- and long-term protection of the wilderness values.

Protection of the wilderness values would also benefit other related resource values such as watershed and the scenic and visual resource.

Mining activities would generally be limited to valid existing claims established prior to designation. See General Section at the beginning of this chapter.

The unit is within a 5-hour drive from six major population centers and 2,400,000 people. Within the region there are five WSAs managed by BLM, two U.S. Forest Service WSAs, and one existing USFS wilderness area. Designation of a WSA as wilderness would add to the geographic distribution of wilderness areas in the region.

Realty/Access

Restrictive access due to wilderness designation could significantly impact 75 acres of non-Federal inholdings and 67 mining claims. See Geology and Minerals in General Section at the beginning of this chapter concerning rights of mining claimants.

Social/Economic

Social - Please refer to General Section at the beginning of this chapter.

Economic - Impacts to local and national economies would be negligible. An additional annual mineral extraction of more than $22,000,00 would be necessary to significantly affect Fremont County employment. It is unlikely that a find of this proportion would occur.

Gains to wilderness users are estimated at less than $50,000 while losses to existing and potential nonwilderness users of this unit are estimated at less than $275,000. See General Comments at the beginning of this chapter.

Management Action	Increases or Decreases	Affected Resource	Estimated Quantity	Units	Period of Impact
Local & Regional					
Wilderness use	Increases	Local employment	<1	People/ year	Long term
	Increases	Local employment	<5,000	Dollars/ year	Long term
Losses of:					
Harvestable timber and firewood	Decrease	Local employment	(<2)	People/ year	Long term
	Decrease	Local income	(<16,000)	Dollars/ year	Long term
Hunting opportunities	Decrease	Local employment	(<1)	People/ year	Long term
	Decrease	Local income	(<4,000)	Dollars/ year	Long term
Potential AUMs	Decrease	Local employment	(<1)	People/ year	Long term
	Decrease	Local income	(<1,000)	Dollars/ year	Long term
National					
Wilderness use	Increases	Net value to users	<50,000	Dollars	Long term
Losses of:					
Current back-country vehicle use	Decrease	Net value to users	<26,000	Dollars	Long term
Future back-country vehicle use	Decrease	Net value to users	(<15,000)	Dollars	Long term
Harvestable timber and firewood	Decrease	Net value to users & producers	(<184,000)	Dollars	Long term
Hunting opportunities plus increased wildlife project costs	Decrease	Net value to users	(<42,000)	Dollars	Long term
Potential AUMs	Decrease	Net value to producers	(<6,000)	Dollars	Long term

Figures in () signify a loss of potential increase due to wilderness management restrictions on planned resource management projects. These figures do not indicate a direct loss.

Alternative B

- No Wilderness Designation (No Action) (Preferred Alternative)

Acres recommended for designation - 0

Air

See General Section at the beginning of this chapter.

Geology and Minerals

Nondesignation would provide the possibility of mineral development within the unit. Development could occur under the guidance provided in the MFP and under the 3809 regulations. See General Section at the beginning of this chapter.

Soils

See General Section at the beginning of this chapter and Appendix B.

Water

See General Section at the beginning of this chapter.

Scheduled aquatic habitat improvement projects of log dams, log wings, and fencing would be allowed. These projects and their beneficial effects are important to existing game fish populations in this unit.

Range

The projects and corresponding long-term benefits identified as lost by wilderness designation (Alternative A) would be permitted. These specifically include a range project (pinon-juniper thinning) and wildlife projects (pinon-juniper manipulation and placement of log dams, wings, and fencing).

Forestry

The harvestable firewood and sawtimber that could not be cut because of wilderness designation (Alternative A) would be harvested, probably within 5-10 years.

Wildlife

All wildlife projects planned for improving terrestrial and aquatic habitats of the Lower Grape Creek unit would proceed as scheduled in the MFP. Terrestrial projects include water catchments and pinon-juniper manipulation resulting in new browse and grass. Range and forestry projects with beneficial side effects for improving terrestrial wildlife habitat would be completed.

Cultural

See General Section at the beginning of this chapter.

Recreation/Visual

Should the unit not be designated, the MFP directs management to reassess recreation management objectives for the area to determine how the entire canyon/creek corridor will be managed. If the decision is to manage the entire stretch to allow motorized trail use, recreation trail bike activity in the WSA could increase 133 percent. If the decision is to manage the corridor under present ROS objectives, motorized use will remain about the same. Wildlife projects planned for improvement of fish habitat would also increase fishing use in the unit.

Management Action	Increases or Decreases	Affected Resource	Estimated Quantity	Units	Period of Impact
Development of trail bike aystem	Increases	Trail bike use	133	Annual recreation days	Short and long term
Development of stream improvement projects (wildlife project)	Increases	Fishing	40	Annual angler days	Short and long term

Wilderness

Projects/uses planned in range (pinon-juniper thinning), recreation (back-country vehicle use), forestry (firewood and timber harvest), and wildlife (stream improvements, catchments) would be implemented if this unit is not designated wilderness. The road construction and surface disturbance associated with these projects/uses as well as mineral development could adversely affect the naturalness of the area in both the short and long term.

Realty/Access

No impacts would result if unit is not designated wilderness. See General Section at the beginning of this chpater.

Social/Economic

Social - Please refer to the General Section at the beginning of this chapter.

Economic - If this alternative were adopted, gains from wilderness designation (Alternative A) would be lost.

Alternative C - Partial Wilderness Designation - I

Acres recommended for designation - 7,300

This alternative has two boundary adjustments which omit the cumulative impacts of past mining operations and eliminates a resource conflict with minerals.

Only those impacts that differ from those identified in Alternative A will be discussed in this section. Refer to that alternative for a discussion of similar impacts on other resources.

Geology and Minerals

The portion of the unit with significant mineral interest is omitted in this alternative. This would provide for mineral development which could occur under the guidance provided in the MFP. See General Section at the beginning of this chapter.

Range

Compared to Alternative A additional pinon-juniper cutting would be allowed under this alternative which would provide more forage. Another pinon-juniper manipulation (wildlife project) would also provide additional forage.

Management Action	Increases or Decreases	Affected Resource	Estimated Quantity	Units	Period of Impact
Restrictions on thinning 660 acres of P/J	Decrease	Livestock	(27)	AUMs/ year	Long term
Restrictions on P/J manipulation on 200 acres (wildlife project)	Decrease	Livestock	(10)	AUMs/ year	Long term

Figures in () signify a loss of potential increase due to wilderness management restrictions on planned resource management projects. These figures do not indicate a direct loss.

Forestry

The boundary modifications of this alternative would omit some operable woodland and sawtimber acres from wilderness designation. This alternative would permit timber harvest on more acres than Alternative A.

Management Action	Increases or Decreases	Affected Resource	Estimated Quantity	Units	Period of Impact
Restrictions on 1,410 operable acres of woodlands management	Decrease	Available firewood	8,921	Cords	Short and long term
	Decrease	Potential firewood	32,430	Cords	Long term
Restrictions on 286 operable acres of PFL management	Decrease	Available sawtimber	1,858	Mbf	Short and long term
	Decrease	Potential sawtimber	6,292	Mbf	Long term

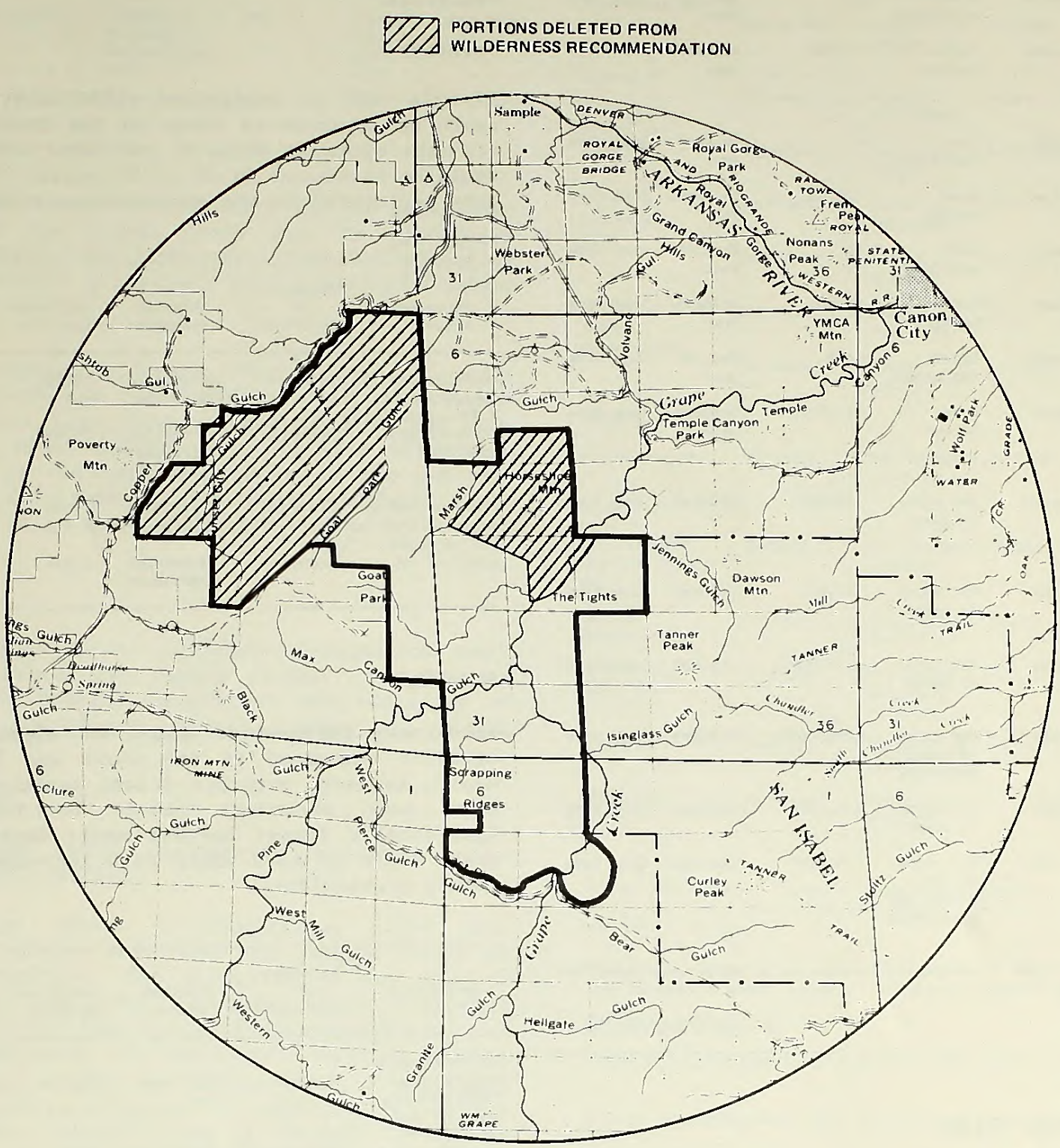
Wildlife

Due to boundary changes, this alternative increases the number of water catchments permitted and acreage of a pinon-juniper thinning project and would result in improved habitat. Interrationships of wildlife with range and forestry were described in Alternative A.

Management Action	Increases or Decreases	Affected Resource	Estimated Quantity	Units	Period of Impact
Restrictions on development of one wildlife water catchment	Decrease	Mule deer use	(5)	Animals	Short and long term
	Decrease	Turkey use	(10)	Birds	Short and
Restrictions on P/J manipulation of 200 acres	Decrease	Mule deer use	(20)	Animals	Short and long term
Restrictions on P/J thinning of 660 acres (range project)	Decrease	Mule deer use	(15)	Animals	Short and long term
Restrictions on management of 1,410 operable acres of woodland and 286 acres of operable PFL (forestry project)	Decrease	Mule deer use	(50)	Animals	Short and long term

Figures in () signify a loss of potential increase due to wilderness management restrictions on planned resource management projects. These figures do not indicate a direct loss.

MAP IV - 3
LOWER GRAPE CREEK - ALTERNATIVE C



Recreation/Visual

Adverse impacts to back-country travel and hunting would be decreased due to boundary modifications which omit more of the unit along Grape Creek.

Management Action	Increases or Decreases	Affected Resource	Estimated Quantity	Units	Period of Impact
Restrictions on motorized vehicle use	Decrease	Trail bike and other existing back-country travel	80	Annual recreation days	Short and long term
	Decrease	Hunting	5	Annual hunter days	Short and long term

Realty/Access

The 75 acres of non-Federal inholdings are omitted in this partial designation alternative. Restrictive access due to wilderness designation could still impact 53 of the 67 mining claims.

See Geology and Minerals in General Section at the beginning of this chapter concerning access rights of mining claimants.

Social/Economic

Economic - Impacts to local and national economies would be negligible. An additional annual mineral extraction of more than $22,000,000 would be necessary to significantly affect Fremont County employment. It is highly unlikely that a find of this proportion will occur.

Gains to wilderness users are estimated at less than $50,000 while losses to existing and potential wilderness users are estimated at less than $154,000.

Management Action	Increases or Decreases	Affected Resource	Estimated Quantity	Units	Period of Impact
Local & Regional					
Wilderness use	Increases	Local employment	<1	People/ year	Long term
Wilderness use	Increases	Local income	<5,000	Dollars/ year	Long term
Losses of:					
Harvestable timber and firewood	Decrease	Local employment	<1	People/ year	Long term
	Decrease	Local income	<10,000	Dollars/ year	Long term
Hunting opportunities	Decrease	Local employment	<1	People/ year	Long term
	Decrease	Local income	<3,000	Dollars/ year	Long term
Potential AUMs	Decrease	Local employment	(<1)	People/ year	Long term
	Decrease	Local income	(<1,000)	Dollars/ year	Long term
National					
Wilderness use	Increases	Net value to users	<50,000	Dollars	Long term
Losses of:					
Current back-country vehicle use	Decrease	Net value to users	<11,000	Dollars	Long term
Future back-country vehicle use	Decrease	Net value to users	(<15,000)	Dollars	Long term
Harvestable timber and firewood	Decrease	Net value to users & producers	(<145,000)	Dollars	Long term
Hunting days	Decrease	Net value to users	(<1,000)	Dollars	Long term
Potential AUMs	Decrease	Net value to producers and government	(<5,000)	Dollars	Long term

Figures in () signify a loss of potentiel increase due to wilderness management restrictions on planned resource management projects. These figurea do not indicate a direct loss.

BEAVER CREEK (016)

Alternative A - All Wilderness Designation

Acres recommended for designation - 26,150

Air

See General Section at the beginning of this chapter.

Geology and Minerals

This unit contains no known mineral deposits and only very limited potential for the discovery of new deposits. Consequently a wilderness designation would have little or no impact on mineral development. See General Section at the beginning of this chapter.

Soils

See General Section at the beginning of this chapter and Appendix B.

Water

See General Section at the beginning of this chapter.

Range

As a result of a memorandum of understanding with DOW grazing is not allowed on the majority of this unit and no projects are proposed. Therefore, wilderness designation would have no effect on rangeland resources.

Forestry

If this unit is designated wilderness, timber harvest would be impacted as shown in the chart below. There are some operable acres of sawtimber and woodland which would be harvested in 10 to 20 years. The majority of this is located in the southwestern corner of the unit.

Management Action	Increases or Decreases	Affected Resource	Estimated Quantity	Units	Period of Impact
Restrictions on management of 3,290 operable acres of woodland	Decrease	Available firewood	10,300	Cords	Long term
	Decrease	Potential firewood	75,670	Cords	Long term
Restrictions on management of 177 operable acres of PFL	Decrease	Available sawtimber	1,098	Mbf	Long term
	Decrease	Potential sawtimber	4,044	Mbf	Long term

Wildlife

Wilderness designation would not significantly impact wildlife resources in the short and long term. It would, however, prohibit forest harvesting which would have some secondary impact on these resources. Specifically forest harvest would increase browse and grass which in turn would also increase mule deer and turkey populations.

Management Action	Increases or Decreases	Affected Resource	Estimated Quantity	Units	Period of Impact
Restrictions on management of 3,290 operable acres of woodland and 177 operable acres of PFL (foreatry project)	Decrease	Mule daer use	(50)	Animals	Long term
	Decrease	Turkey use	(100)	Birds	Long term

Figures in () signify a loss of potential increase due to wildernass management restrictions on planned resource management projects. Thesa figuras do not indicata a direct loss.

Cultural

See General Section at the beginning of this chapter.

Recreation/Visual

The area boundaries of this alternative extend into Phantom Canyon. As a result the restrictions on motorized vehicle use may prohibit some picnicking and camping at sites along Eightmile Creek. Also see General Section at the beginning of this chapter.

Management Action	Increases or Decreases	Affected Resource	Estimated Quantity	Units	Period of Impact
Restrictions on motorized vehicles	Decreese	Picnicking and camping along Eight-mile Creek	1,188	Annual recreation days	Long term
Publicizing eree through designetion	Increasee	Fishing, hunting, beckpacking, etc.	840	Annual recreetion deys	Long term

Wilderness

The proposed forestry harvest would not be permitted. Designation of the Beaver Creek unit as wilderness would have a short- and long-term beneficial effect by providing additional protection to the resource values present in the area.

The unit is within a 5-hour drive from six major population centers and 2,4000,000 people. Within the region there are five WSAs managed by BLM, two U.S. Forest Service WSAs, and one existing USFS wilderness area (located in the northeast corner of the region). Designation of this unit as wilderness would contribute to the balance of geographic distribution of wilderness areas.

Realty/Access

Restrictive access due to wilderness designation could significantly impact two mining claims. See Geology and Minerals in General Section at the beginning of this chapter concerning access rights of mining claimants.

Social/Economic

Social - Please refer to General Section at the beginning of this chapter.

Economic - The impact of designation under this alternative on local employment and income would be extremely negligible. The proximity to the area of Colorado Springs and Canon City makes it unlikely that a mineral find would have a significant impact on local employment. Assuming all employment were in Fremont County an annual mineral extraction value of more than $22,000,000 would be necessary to significantly affect local employment. However, much of the impact would be absorbed by El Paso County. To impact both areas, an estimated annual mineral value extraction process of more than $275,000,000 would be needed. It is highly unlikely that a find of this proportion would occur.

Gains to wilderness users would approximate $525,000. The total losses if full designation occurs, mainly to back-country vehicle users, picnickers, forestry, and range, are estimated at $150,000.

Management Action	Increases or Decreaaas	Affected Rasource	Estimated Quantity	Unita	Period of Impact
Locel & Regional					
Wilderness use	Incraaaea	Locel employment	<5	Paople/ yaar	Long tarm
	Increases	Locel income	<25,000	Dollera/ year	Long tarm
Loases of:					
Harvesteble timber and firewood	Decreasa	Local employment	(<1)	People/ yeer	Long term
	Decrease	Locel income	(<10,000)	Dollars/ year	Long term
Potential AUMs	Decreese	Local employment	(<1)	People/ year	Long term
	Decrease	Local income	(<2,000)	Dollars/ year	Long term
Potential hunter expenditures	Decreese	Local employment	(<1)	People/ year	Long term
	Decrease	Locel income	(<2,000)	Dollars/ year	Long term
National					
Wilderness use	Increases	Net consumer benefits	<525,000	Dollars	Long term
Losses of:					
Current back-country vehicle use	Decrease	Net consumer benefits	<3,000	Dollars	Long term
Current picnickers	Decrease	Net consumer benefits	<80,000	Dollars	Long term
Harvestable timber and firewood	Decrease	Net producer and user benefits	(<50,500)	Dollars	Long term
Potential AUMs	Decrease	Net producer benefits	(<9,000)	Dollars	Long term
Potential hunter days	Decrease	Net consumer benefits	(<11,000)	Dollars	Long term

Figures in () signify a loss of potential increase due to wilderness management restrictions on planned resource management projects. These figures do not indicate a direct loss.

Alternative B

- No Wilderness Designation (No Action)

Acres recommended for designation - 0

Air

See General Section at the beginning of this chapter.

Geology and Minerals

Nondesignation would provide the possibility of mineral development within the unit in the long term. However, no known mineral potential exists in the WSA at this time. See General Section at the beginning of this chapter.

Soils

See General Section at the beginning of this chapter and Appendix B.

Water

See General Section at the beginning of this chapter.

Range

No impacts.

Forestry

Harvestable firewood and sawtimber identified as lost in Alternative A would be harvested probably within 10 to 20 years.

Wildlife

The woodlands and PFL harvest prohibited under Alternative A would be permitted. This would indirectly increase browse and grass and benefit wildlife.

Cultural

No impacts.

Recreation/Visual

The majority of the area would still be managed under primitive ROS criteria (approximately 12,533 acres) which very much parallels wilderness management. Lands around the primitive boundary would be managed primarily under semiprimitive nonmotorized criteria. Present use patterns should not differ significantly under this alternative.

Wilderness

Under nondesignation the unit would be managed for protection of primitive values, therefore, most wilderness values would not be affected. However, the southwestern corner of the unit from Holbert drainage south contains some firewood potential as discussed in Forestry for this unit in Alternative A - All Wilderness Designation. If this firewood were harvested in 10 to 20 years the primitive values on approximately 12 percent of the unit would be lost for the long term.

Realty/Access

No impacts.

Social/Economic

Social - Please refer to the General Section at the beginning of this chapter.

Economic - Only those values identified as net gains due to wilderness designation (Alternative A) would not be realized if this alternative were adopted.

Alternative C - Partial Wilderness Designation - I

Acres recommended for designation - 20,750

This alternative makes boundary adjustments which omit three narrow extensions and results in a more manageable unit. A resource conflict with recreation is eliminated.

Only those impacts that differ from those discussed in Alternative A will be addressed in this section. Refer to that alternative for a discussion of similar impacts on other resources.

Forestry

Under this Alternative, impacts on PFL are less than in Alternative A because boundary changes omit some of the operable acreage.

Management Action	Increases or Decreases	Affected Resource	Estimated Quantity	Units	Period of Impact
Restrictions on management of 57 operable acres of PFL	Decrease	Available sawtimber	308	Mbf	Long term
	Decrease	Potential sawtimber	1,274	Mbf	Long term

Wildlife

Due to boundary changes in this alternative, an additional 120 operable acres of PFL harvest would occur. The secondary benefits to wildlife, however, would be minimal.

Wilderness

The boundaries in this alternative were adjusted to make the unit more manageable. No projects are currently planned on lands omitted by the boundary change and, as a result, little impact would occur in the short term if these portions were not designated wilderness.

The remainder of the unit (20,750 acres) would be protected as described in General Section at the beginning of this chapter.

Social/Economic

Economic - The impacts of designation on local employment and income would be extremely negligible. The proximity to the area of Colorado Springs and Canon City makes it unlikely that a mineral find would have a significant impact on local employment.

Gains to wilderness users would be approximately $525,000. Losses from designation which would occur, mainly to back-country vehicle users, are less than $32,000.

Management	Increases or Decreases	Affected Reaource	Estimated Quantity	Units	Period of Impact
Local & Regional					
Wilderness use	Increases	Local employment	<5	People/ year	Long term
	Increases	Local income	<25,000	Dollars/ year	Long term
Losses of:					
Harvestable timber	Decrease	Local employment	(<1)	People/ year	Long term
	Decrease	Local income	(<7,000)	Dollars/ year	Long term
Potential AUMS	Decrease	Local employment	(<1)	People/ year	Long term
	Decrease	Local income	(<2,000)	Dollars/ year	Long term
Potential hunter expenditures	Decrease	Local employment	(<1)	People/ year	Long term
	Decrease	Local income	(<2,000)	Dollars/	Long term

Mansgement Action	Increasea or Decreasea	Affected Reeource	Estimated Qusntity	Unite	Period of Impact
National					
Wilderness use	Increases	Net consumer beneifite	<525,000	Dollars	Long term
Losses of:					
Current back-country vehicle use	Decrease	Net conaumer benefits	<3,000	Dollars	Long term
Hsrvestable timber snd firewood	Decrease	Net producer snd user benefite	(<45,000)	Dollsrs	Long term
Potential AUMs	Decrease	Net producer and user benefits	(<9,000)	Dollsrs	Long term
Potential hunter daye	Decresse	Net consumer benefits	(<11,000)	Dollars	Long term

Figures in () eignify s loss of potential increase due to wilderness mansgement reetrictions on plsnned resource management projects. These figures do not indicste s direct lose.

Alternative D

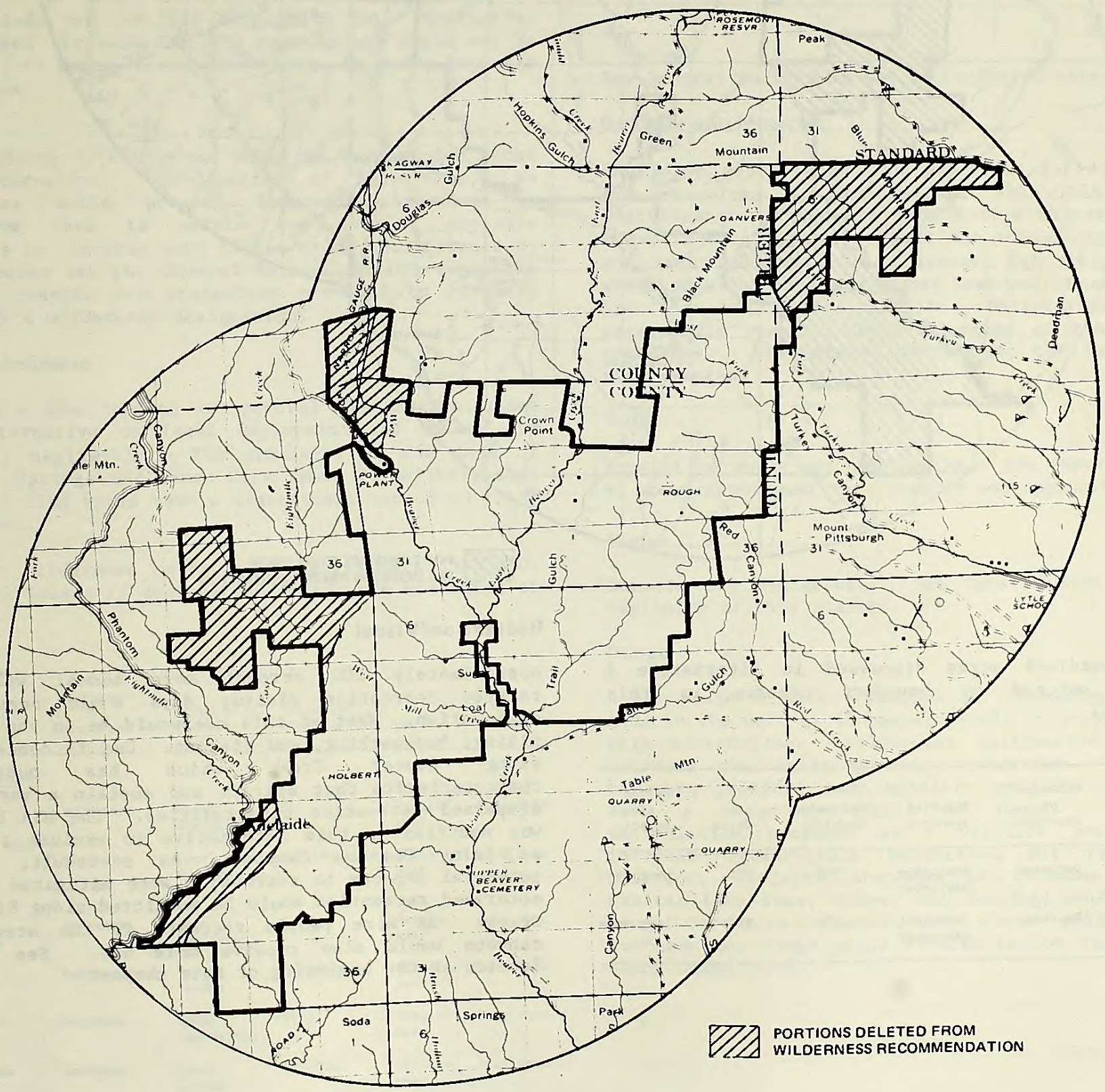
- Partial Wilderness Designation - II (Preferred Alternative)

Acres recommended for designation - 17,000

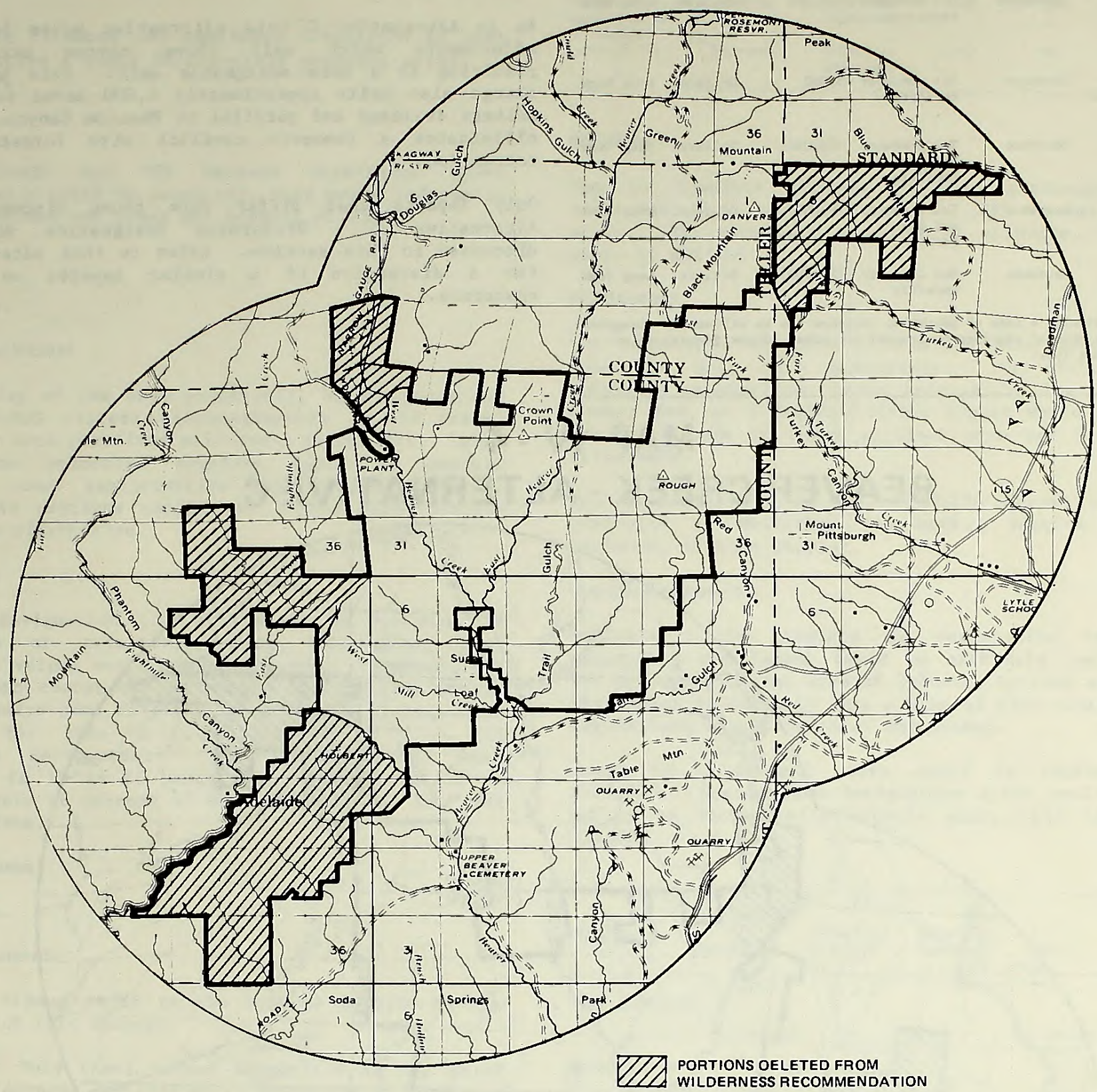
As in Alternative C this alternative makes boundary adjustments which omit three narrow extensions resulting in a more manageable unit. This boundary change also omits approximately 4,000 acres south of Holbert drainage and parallel to Phantom Canyon. This elliminates a resource conflict with forestry and recreation.

Only impacts that differ from those discussed in Alternative A - Wilderness Designation will be discussed in this section. Refer to that alternative for a discussion of a similar impacts on other resources.

MAP IV - 4
BEAVER CREEK - ALTERNATIVE C



MAP IV - 5
BEAVER CREEK - ALTERNATIVE D



Forestry

Operable woodland acres discussed in Alternative A would be omitted by boundary changes in this alternative.

Management Action	Increases or Decreases	Affected Resource	Estimated Quantity	Units	Period of Impact
Reatrictiona on managemant of 57 operable acrea of PFL	Dacraase	Available aawtimber	308	Mbf	Long term
	Dacraase	Potential sawtimber	1,274	Mbf	Long term

Recreation/Visual

Approximately 200 percent more annual wilderness related recreation visitor days would occur with designation. Most of this use would be in the form of hiking, backpacking, and fishing. Use is concentrated along Beaver Creek which has outstanding characteristics that attract and sustain a variety of dispersed recreation opportunities. The WSA boundary was modified in this alternative to exclude the land adjoining Phantom Canyon. As a result, several potential impacts to recreation were mitigated because motorized recreation would be permitted along Eightmile Creek. As more people recreate in the area, side canyons would also receive more use. See General Section at the beginning of this chapter.

Manegement Action	Increeeee or Decreeeea	Affected Reeource	Estimated Quantity	Units	Period of Impact
Publicizing eraa by designation	Increeses	Hiking, beckpacking, end fiehing	840	Annuel recree-tion daye	Short and long term

Wilderness

One of the portions of this unit which would be omitted by boundary changes in this alternative includes approximtely 4,000 acres south of Holbert drainage.

The firewood harvest project planned in this excluded portion would be implemented within 10-20 years. This could result in a loss in some primitive and unconfined recreation, solitude, and naturalness due to associated surface disturbing activities such as road building. These impacts would not be obvious to the majority of recreational users of this unit since access to this portion of the unit from the rest of the WSA is limited by steep rugged topography. This portion of the WSA receives very little recreational use.

The remainder of the land omitted by this alternative was removed for manageability reasons and would not be affected, at least in the short term, if not designated wilderness.

The remaining 17,000 acres would be recommended under this alternative. Designation of these lands as wilderness would provide long-term benefits by preserving land to permit the natural ecologic processes to continue with little or no interference by man. Please see the General Section at the beginning of this chapter for protection provided to resource values by a wilderness designation.

Social/Economic

Economic - The impacts of partial designation under this alternative on local employment and income are extremely negligible. The proximity to the area of Colorado Springs and Canon City makes it unlikely that a mineral find would have a significant impact on local employment.

Gains to wilderness users would approximate $525,000. The total losses if designation occurs are estimated at $15,000.

Management Action	Increases or Decreases	Affected Resource	Estimated Quantity	Units	Period of Impact
Local & Regional					
Wilderness use	Increases	Local employment	<5	People/ year	Long term
	Increases	Local income	<25,000	Dollars/ year	Long term
Losses of:					
Harvestable timber and firewood	Decrease	Local employment	(<1)	People/ year	Long term
	Decrease	Local income	(<1,000)	Dollars/ year	Long term
Potentiel hunter expenditures	Decrease	Local employment	(<1)	People/ year	Long term
	Decreese	Locel income	(<2,000)	Dollars/ year	Long term
National					
Wilderness uee	Increesea	Net consumer benafits	<525,000	Dollare	Long term
Losses of:					
Harvestable timber and firewood	Decreeee	Net producer & user benefits	(<3,000)	Dollars	Long term
Potential AUMs	Decrease	Net producer end user benefits	(<1,000)	Dollers	Long term

Figures in () signify a loss of potential increase due to wilderness management restrictions on planned resource management projects. These figures do not indicate a direct loss.

UPPER GRAPE CREEK (017)

Alternative A - All Wilderness Designation

Acres recommended for designation - 10,200

Air

See General Section at the beginning of this chapter.

Geology and Minerals

The known deposits and the potential for discovery of new resources in and around this WSA are not siginficant. There has been little mineral interest shown in this unit throughout the wilderness inventory and study phases. Some interest for thorium in the areas adjacent to the unit has been evidenced by mining locations and mineral activity. Designation would not necessarily prevent the development of these mineral resources. See General Section at the beginning of this chapter.

Soils

Impacts to soils are negligible. See General Section at the beginning of this chapter and Appendix B.

Water

Impacts are negligible. See General Section at the beginning of this chapter.

Range

Range projects with potential of increasing available AUMs in the unit by 13 percent would be prevented under this alternative. Wilderness designation would not decrease the existing range condition. It would, however, prohibit some wildlife projects which would have a secondary effect on range. Vegetative manipulation proposed as a wildlife project would increase browse/grass production for range. In addition, projects proposed to increase fisheries habitat (log dams, wings, and fencing) would increase range resources. Specifically these projects would increase key range grass species in the riparian area along Grape Creek.

Management Action	Increases or Decreases	Affected Resource	Estimated Quantity	Units	Period of Impact
Restrictions on thinning 1,440 acres, P/J on 3 sites	Decrease	Livestock	100	AUMs/ year	Long term
Restrictions on manipulation of 200 acres P/J (wildlife project)	Decrease	Livestock	(15)	AUMs/ year	Long term
Restrictions on placing log dams, wings, and fencing in Grape Creek (wildlife project)	Decrease	Livestock	(50)	AUMs/ year	Long term

Figures in () signify a loss of potential increase due to wilderness management restrictions on planned resource management projects. These figures do not indicate a direct loss.

Forestry

Cordwood and sawlog harvest is scheduled within 10 years; wilderness designation would prohibit this harvest. See General Section at the beginning of this chapter.

Management Action	Increases or Decreases	Affected Resource	Estimated Quantity	Units	Period of Impact
Restrictions on management of 922 operable acres of wood land	Decrease	Available firewood	5,634	Cords	Short and long term
	Decrease	Potential firewood	21,206	Cords	Long term
Restrictions on management of 1,003 operable acres of PFL	Decrease	Available sawtimber	6,820	Mbf	Short and long term
	Decrease	Potential sawtimber	22,066	Mbf	Long term

Wildlife

Wilderness designation would have significant adverse long-term impacts on improvements of terrestrial wildlife habitat. Planned wildlife projects including water catchments for increasing water availability and pinon-juniper harvest resulting in new browse and grass would be prohibited. One range project and two forestry projects which would create more wildlife habitat would also be prohibited. Without these projects, populations of wildlife would not expand because of limited food and water. These projects are important for improving mule deer and wild turkey habitat in the Upper Grape Creek Area.

Aquatic wildlife resources would also be significantly impacted in the long term by wilderness designation. Planned habitat improvements, such as the construction of log dams and wings, using heavy machinery, and fencing would be prohibited. Construction of these stream projects without the assistance of heavy equipment is not feasible because of the remote location and rugged topography. Without these projects quantity of game fish would decrease and nongame fish would increase.

Management Action	Increases or Decreases	Affected Resource	Estimated Quantity	Units	Period of Impact
Restrictions on developing 3 water catchments	Decrease	Mule deer	(25)	Animals	Long term
	Decrease	Turkey use	(50)	Birds	Long term
Restrictions on 200 acres of P/J manipulation	Decrease	Mule deer use	(25)	Animals	Long term
Restrictions on developing log dams, wings, and fencing on Grape Creek	Decrease	Game fish use	10	Pounds/ acre	Long term
	Decrease	Game fish use	(50)	Pounds/ acre	Long term
Restrictions on developing log dams, wings, and fencing on Grape Creek	Increase	Nongame fish use	10	Pounds/ acre	Long term
Restrictions on 1,440 acres of P/J thinning (range project)	Decrease	Mule deer use	(50)	Animals	Long term
Restrictions on management of 922 operable acres of woodland and 1,003 operable acres of PFL (forestry project)	Decrease	Mule deer use	(75)	Animals	Long term
	Decrease	Turkey use	(50)	Birds	Long term

Figures in () signify a loss of potential increase due to wilderness management restrictions on planned resource management projects. These figures do not indicate a direct loss.

Cultural

No impacts. See General Section at the beginning of this chapter.

Recreation/Visual

Existing trail bike use in this unit is primarily concentrated in the vicinity of the confluence of Bear Gulch and Grape Creek. The loss shown on the chart in parentheses for trail bike use would occur assuming management of the entire Grape Creek corridor would allow motorized vehicles, thus encouraging trail bike activity.

Management Action	Increases or Decreases	Affected Resource	Estimated Quantity	Units	Period of Impact
Restrictions on motorized vehicle use	Decrease	Trail bike use and other back-country vehicle travel	100	Annual recreation days	Short and long term
	Decrease	Trail bike use	(133)	Annual recreation days	Short and long term
Restrictions on motorized vehicle use	Decrease	Hunting	10	Annual hunter days	Short and long term
	Decrease	Fishing	10	Annual angler days	Short and long term
Restrictions on development of fishery improvement projects	Decrease	Fishing	(20)	Annual recreation days	Short and long term

Management Action	Increases or Decreases	Affected Resource	Estimated Quantity	Units	Period of Impact
Publicizing area through designation	Increase	Fishing, hunting, backpacking, etc.	110	Annual recreation days	Short and long term

Figures in () signify a loss of potential increase due to wilderness management restrictions on planned resource management projects. These figures do not indicate a direct loss.

Wilderness

Designation of this WSA as wilderness would have a beneficial impact by providing both short- and long-term protection of the wilderness values. Mining activities would be generally limited to valid mining claims established before designation. This would prohibit the majority of mining activities and associated developments such as road construction and other surface disturbing activities. Also see General Section at the beginning of this chapter.

The unit is within a 5-hour drive of six major population centers and 2,400,000 people. Within the region there are five WSAs managed by BLM, two U.S. Forest Service WSAs, and one existing USFS wilderness area. Designation of a WSA as wilderness would add to the geographic distribution of wilderness areas in the region.

Realty/Access

Wilderness designation could restrict access to 30 acres of non-Federal inholdings and 148 mining claims. See Geology and Minerals in General Section at the beginning of this chapter concerning access rights of mining claimants.

Social/Economic

Social - Please refer to General Section at the beginning of this chapter.

Economic - Impacts to local and national economies would be negligible. An additional annual mineral extraction of more than $22,000,000 would be necessary to significantly affect Fremont County employment. It is highly unlikely that a find of this proportion would occur.

Total gains to wilderness users would be less than $50,000 while losses to existing and potential nonwilderness users of this unit are estimated at $275,000 or less. See General Section at the beginning of this chapter.

Management Action	Increases or Decreases	Affected Resource	Estimated Quantity	Units	Period of Impact
Local & Regional					
Wilderness use	Increase	Local employment	<1	People/ year	Long term
	Increase	Local income	<5,000	Dollars/ year	Long term
Losses of:					
Harvestable timber and firewood	Decrease	Local employment	(<2)	People/ year	Long term
	Decrease	Local income	(<23,000)	Dollars/ year	Long term
Hunting opportunities	Decrease	Local employment	(<1)	People/ year	Long term
	Decrease	Local income	(<5,000)	Dollars/ year	Long term
Potential AUMs	Decrease	Local employment	(<1)	People/ year	Long term
	Decrease	Local income	(<2,000)	Dollars/ year	Long term
National					
Wilderness use	Increases	Net value to users	<50,000	Dollars	Long term
Losses of:					
Current back-country vehicle use	Decrease	Net value to users	<26,000	Dollars	Long term
Harvestable timber and firewood	Decrease	Net value consumers & producers	(<172,000)	Dollars	Long term
Potential AUMs	Decrease	Net value to producers & government	(<20,000)	Dollars	Long term
Wildlife and increased project costs	Decrease	Net value to consumers & producers	(<41,000)	Dollars	Long term
Potential back-country vehicle use	Decrease	Net value to ORV users	(<13,000)	Dollars	Long term

Figures in () signify a loss of potential increase due to wilderness management restrictions on planned resource management projects. These figures do not indicate a direct loss.

Alternative B

- No Wilderness Designation (No Action) (Preferred Alternative)

Acres recommended for designation - 0

Air

See General Section at the beginning of this chapter.

Geology and Minerals

Nondesignation would provide the possibility of mineral development within the unit. Development could occur under the guidance provided in the MFP and under 3809 regulations. See General Section at the beginning of this chapter.

Soils

See General Section at the beginning of this chapter and Appendix B.

Water

See General Section at the beginning of this chapter.

Range

The projects and corresponding long-term benefits identified as lost by wilderness designation (Alternative A) would be permitted. These include two pinon-juniper thinnings, (one range and one forestry). Additionally a pinon-juniper thinning and placement of log dams, wings, and fencing proposed for wildlife would be permitted.

Forestry

The harvestable firewood sawtimber that could not be cut because of wilderness designation (Alternative A) would be harvested probably within 5 to 10 years.

Wildlife

All wildlife projects planned for improving terrestrial and aquatic habitat of this unit would occur. Terrestrial projects include water catchments and harvest of pinon-juniper resulting in new browse and grass. Range and forestry projects, which would have beneficial side effects on terrestrial wildlife habitat by providing more new browse and grass, would occur.

Aquatic habitat improvement projects, including the construction of log dams, log wings, and fencing would be allowed under this alternative.

Cultural

See General Section at the beginning of this chapter.

Recreation/Visual

Should the unit not be designated, MFP direction is for management to reassess recreation management objectives for the area to determine how the entire canyon/creek corridor would be managed. If the decision is to manage the entire stretch to allow motorized trail use, recreation trail bike activity in the WSA could increase by 133 percent. If the decision is to manage the corridor under present ROS objectives, motorized use would remain about the same. Fishing use would increase due to improvements of fisheries habitat.

Management Action	Increases or Decreasas	Affected Resource	Estimated Quantity	Units	Period of Impact
Development of trail bike ayatem	Increasaa	Trail bike use	133	Annual recre-tion days	Long term
Development of improvemant projacts	Increases	Fishing	40	Annual anglar days	Long term

Wilderness

The projects/uses in range (pinon-juniper thinning), receation (back-country vehicle use), forestry (firewood harvest), and wildlife (stream improvements, catchments) identified as lost by wilderness designation (Alternative A) would be permitted. These could decrease solitude, naturalness, and primitive recreational values in the long term on approximately 19 percent of the unit.

Realty/Access

No impacts would result if unit is not designated wilderness.

Social/Economic

Social - Please refer to General Section at the beginning of this chapter.

Economic - If this alternative were adopted, gains from wilderness designation (Alternative A) would not be realized.

Alternative C - Partial Wilderness Designation - I

Acres recommended for designation - 9,600

This alternative has two boundary changes. One would result in a more manageable unit and eliminate a resource conflict with recreation. The other change would exclude patented lands along the eastern boundary.

Only those impacts that differ from those discussed in Alternative A will be addressed in this section. Refer to that alternative for a discussion of similar impacts on other resources.

Recreation/Visual

Land immediately south of Bear Gulch would not be designated, therefore, there would be less impact on recreation days and angler days.

Management Action	Increases or Decreasea	Affected Resource	Estimated Quantity	Units	Period of Impact
Restrictions on motorized vehicle use	Decrease	Trail bike uae and other exist-ing back-country trail bike	40	Annual recre-ation days	Short and long tarm
	Dacrease	Fishing	3	Annual anglar days	Short and long term

Realty/Access

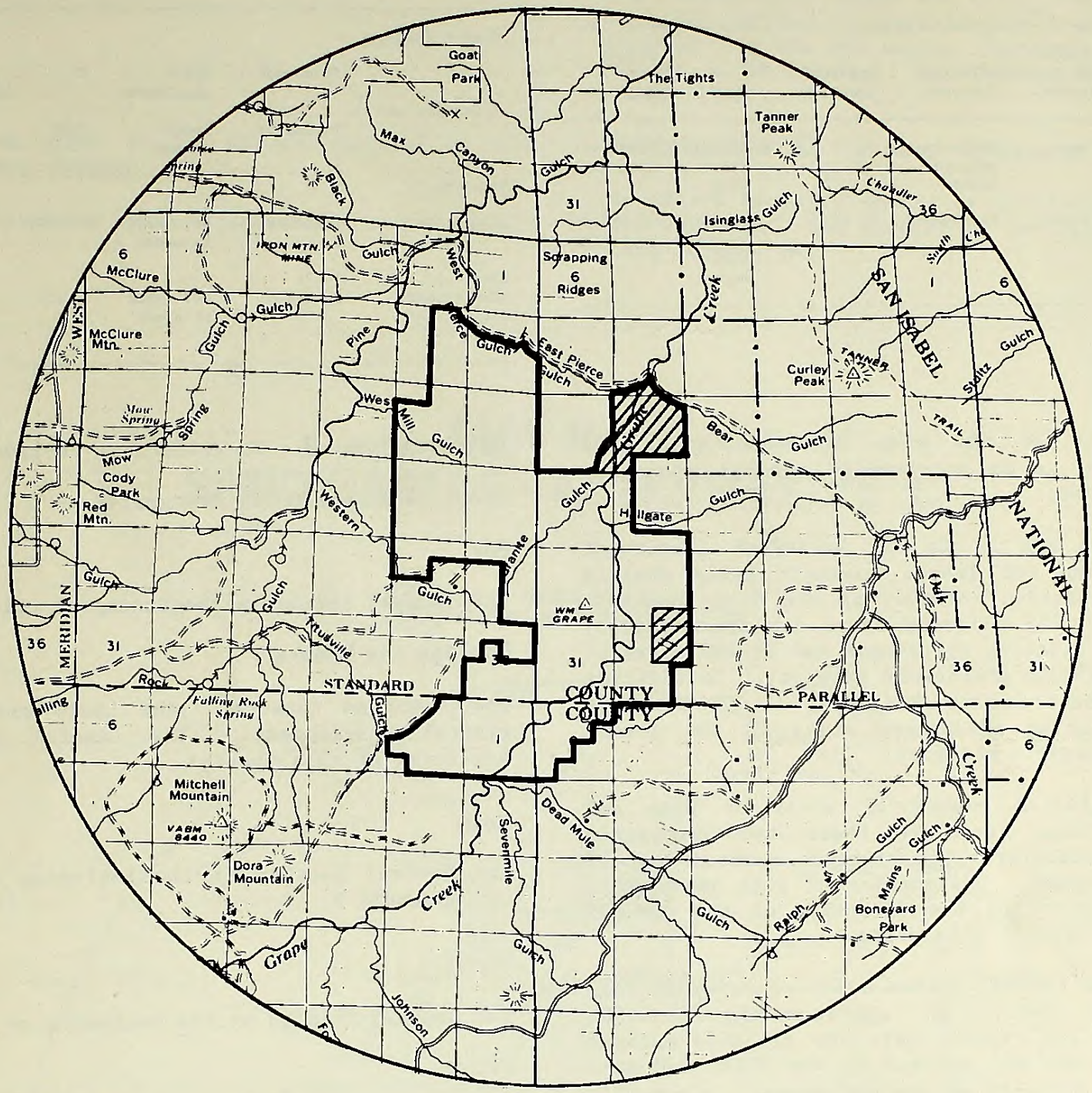
Boundary changes exclude non-Federal inholdings and 134 mining claims. Therefore, there would be no wilderness restrictions on access to these inholdings and claims. See Geology and Minerals in General Section at the beginning of this chapter concerning access rights of mining claimants.

Social/Economic

Economic - Impacts would be the same as Alternative A except for current back-country vehicle use.

Management Action	Increasas or Decraaaaa	Affected Raaource	Estimated Quantity	Units	Period of Impact
National					
Losses of current back-country vehicla use	Decraaae	Net value to usars	11,000	Dollars	Long tarm

MAP IV - 6
UPPER GRAPE CREEK - ALTERNATIVE C



SAND CASTLE (135)

Alternative A - All Wilderness Designation (Preferred Alternative)

Acres recommended for designation - 1,644

Air

See General Section at the beginning of this chapter.

Geology and Minerals

This unit contains no known mineral deposits and only limited potential for the discovery of new deposits. Consequently a wilderness designation would have little or no impact on mineral development. See General Section at the beginning of this chapter.

Soils

See General Section at the beginning of this chapter and Appendix B.

Water

See General Section at the beginning of this chapter.

Range

No impacts.

Forestry

No impacts.

Wildlife

No impacts.

Cultural

See General Section at the beginning of this chapter.

Recreation/Visual

The semiprimitive nonmotorized portion (80 percent) of the unit would not be affected by wilderness designation. A minor amount of four-wheel driving and dune buggy riding would be lost on the semiprimitive motorized portion (20 percent) of the unit.

Management Action	Increases or Decreases	Affected Resource	Estimated Quantity	Units	Period of Impact
Restrictions on motorized vehicle uae	Decrease	Back-country vehicle travel	15	Annual recrea-tion	Short and long term
Publicizing area through designation	Increases	Day/hikers	15	Annual recrea-tion days	Short and long term

Wilderness

The significance of the area for educational and scientific study as an untrammeled natural ecosystem could be preserved.

The Sand Castle WSA is in the saltbrush greasewood (1,000 acres) and the fescue mountain muhly prairie (600 acres) vegetative category in the Rocky Mountain Forest Province. In Colorado there are approximately 33,000 acres of existing wilderness and 28,500 acres of WSAs in the saltbrush greasewood category. In addition to this unit there are approximately 10,000 acres of WSA and no existing wilderness areas in the fescue mountain muhly prairie category.

There are a limited number of acres of WSAs and existing wilderness areas in these two vegetative categories (particularly in fescue mountain muhly prairie) in Colorado. Designation of this unit would contribute to expanding the diversity of the natural systems and features in this state.

This unit can be reached within a 5-hour drive of four major population centers and approximately 2,100,000 people. Within the region there are two WSAs managed by BLM, part of one WSA managed by the USFS, and part or all of four existing wilderness areas. Since this WSA is contiguous with the existing Great Sand Dunes Wilderness Area it would not contribute significantly to balancing the geographic distribution of wilderness areas.

Realty/Access

This unit contains no non-Federal inholdings nor mining claims.

Social/Economic

Social - Please refer to General Section at the beginning of this chapter.

Economic - The impact of wilderness designation on local employment and income would be extremely negligible. A significant employment impact on Alamosa County or Saguache County would necessitate an additional annual mineral extraction of more than $12,000,000 and $4,000,000 respectively. Additional annual mineral extraction of more than $30,000,000 would be necessary to significantly affect employment in the San Luis Valley. It is highly unlikely that a find of this proportion would occur.

Gains to wilderness users are estimated at $20,000. Total losses, mainly to back-country vehicle users, are estimated to be approximately $5,000.

Managament Action	Increasas or Decreases	Affected Reaource	Estimated Quantity	Units	Period of Impact
Local & Regional					
Wilderness use	Increasas	Local employment	<1	People/ year	Long term
	Increases	Local income	<500	Dollars/ year	Long term
National					
Wilderness use	Increases	Net value to users	<17,000	Dollars/ year	Long term
Losses of back-country vehicle use	Decreaae	Net value to users	<5,000	Dollars/ year	Long term

Alternative B - No Wilderness Designation (No Action)

Acres recommended for designation - 0

Air

See General Section at beginning of this chapter.

Geology and Minerals

There are no impacts. The lands would be open for mineral development. See General Section at the beginning of this chapter.

Soils

See General Section at the beginning of this chapter and Appendix B.

Water

See General Section at the beginning of this chapter.

Range

No impacts.

Forestry

No impacts.

Wildlife

No impacts.

Cultural

There would be no impacts if the unit is not designated wilderness.

Recreation/Visual

The minor amount of four-wheel driving and dune buggy use would continue to occur under the guidance provided in the MFP.

Wilderness

If this WSA is not designated wilderness, back-country vehicle use would continue. This use would detract from the opportunity for primitive types of recreation and solitude shared between the Sand Castle WSA and the Great Sand Dunes Wilderness Area.

Realty/Access

No impacts.

Social/Economic

Social - Please refer to the General Section at the beginning of this chapter.

Economic - Only those values identified as net gains due to wilderness designation would not be realized if this alternative were adopted.

Alternative C - Partial Wilderness Designation - I

Acres recommended for designation - 1,484

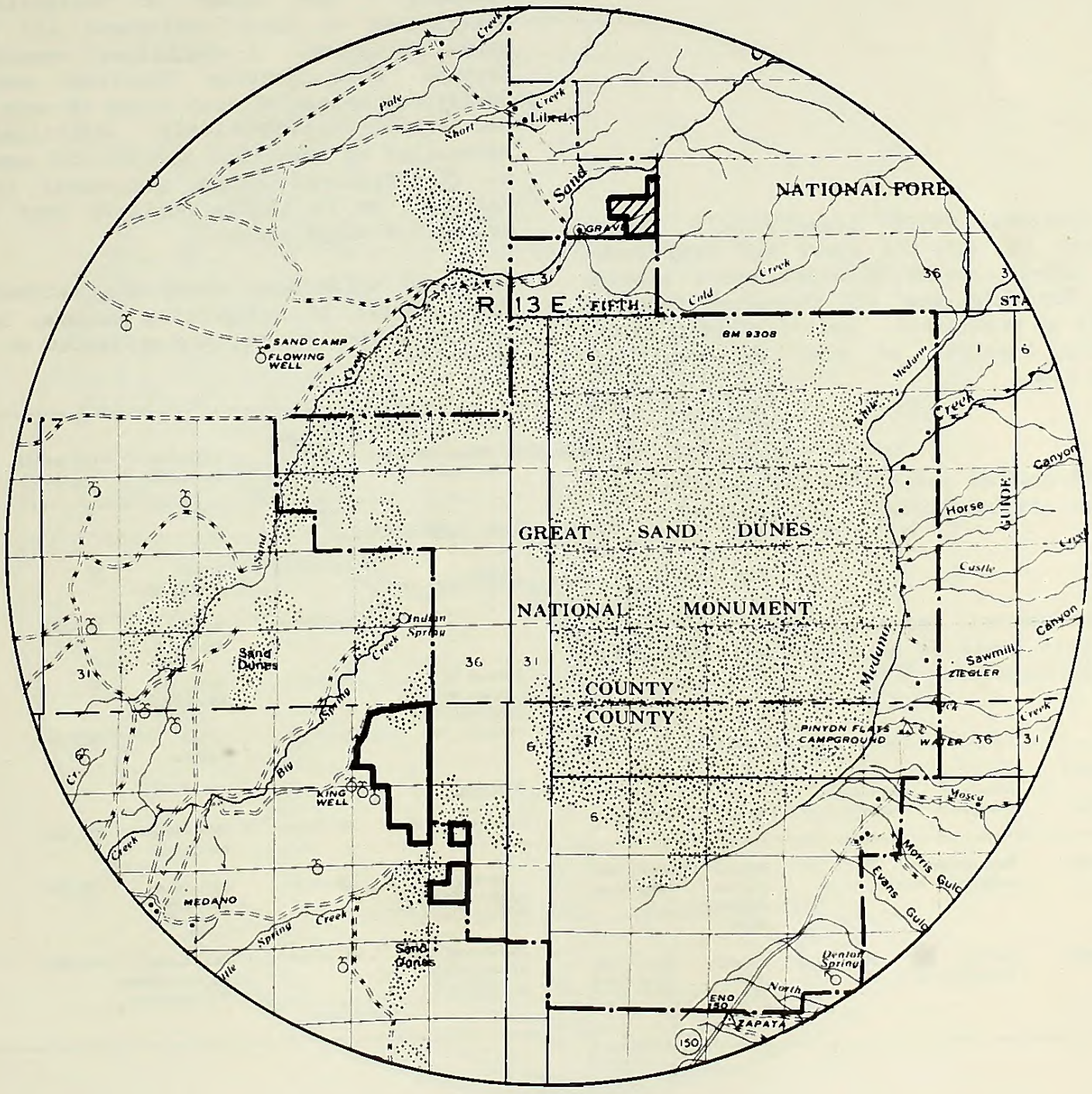
This alternative omits 160 acres from the unit. This excluded portion is approximately 7 miles from the main part of the WSA and would, therefore, be difficult to manage as wilderness. All impacts are the same as in Alternative A.

Alternative D - Partial Wilderness Designation - II

No second boundary change or modification was feasible for this WSA. See Chapter II for rationale supporting this conclusion.

MAP IV - 7
SAND CASTLE - ALTERNATIVE C

PORTIONS DELETED FROM WILDERNESS RECOMMENDATION



SAN LUIS HILLS (141)

Alternative A - All Wilderness Designation

Acres recommended for designation - 10,240

Air

See General Section at beginning of this chapter.

Geology and Minerals

There is a favorable zone of copper, antimony, arsenic, molybdenum, gold, and silver throughout the area. Much mineral exploration interest in this unit has been expressed throughout the inventory process. Designation would not necessarily prohibit the development of these mineral resources. See General Section at the beginning of this chapter.

Soils

See General Section at the beginning of this chapter and Appenix B.

Water

See General Section at the beginning of this chapter.

Range

No impacts

Forestry

No impacts.

Wildlife

Wilderness designation would significantly impact wildlife resources in both the short and long term. Development of water catchments which would provide increased water for mule deer and therefore increase populations would be prohibited. Specific developments and corresponding benefits to wildlife cannot be measured at this time.

Cultural

No impacts are identified under this alternative. See General Section at the beginning of this chapter.

Racreation/Visual

Users of the roaded natural and semiprimitive motorized portions of the unit would be adversely affected by a loss in annual visitor days.

Managament Action	Increesea or Decreasee	Affected Reaource	Estimated Quantity	Unite	Period of Impact
Restrictions on motorized vehicle uae	Decreese	Back-country vehicle travel	75	Annual recre-etion deys	Short and long term
Publicize eres through desig-nstion	Incraaaes	Hiking, beckpacking	50	Annuel recre-ation daye	Short end long term

Wilderness

If this unit is designated wilderness the wilderness values of naturalness, primitive and unconfined recreation, and solitude would be preserved. See General Section at the beginning of this chapter.

The San Luis Hills WSA is in the fescue mountain muhly prairie classification of the Rocky Mountain Forest Province. In Colorado, aside from this unit, there are approximately 600 acres of WSA (Sand Castle) in this vegetative classification. The presence of this vegetative category in the National Wilderness Preservation System would contribute to expanding the diversity of the natural systems and features in the state.

Realty/Access

Restrictive access due to wilderness designation could significantly impact 640 acres non-Federal inholdings and 85 mining claims. See Geology and Minerals in general section at the beginning of this chapter concerning access rights of mining claimants.

Social/Economic

Social - Please refer to General Section at the beginning of this chapter.

Economic - The impact of designation under this alternative on local employment and income would be very negligible. A significant employment impact on Conejos and Costilla Counties would necessitate additional annual mineral finds of more than $5,000,000 and $2,000,000 respectively. Additional annual mineral extraction of more than $30,000,000 would be necessary to significantly affect employment in the San Luis Valley. It is highly unlikely that a find of this proportion would occur.

Gains to wilderness users are estimated at $55,000. Total losses if designation occurs, mainly to back-country vehicle users, are estimated to be $85,000.

Management Action	Increeeee or Dacreesee	Affected Resource	Estimated Quantity	Units	Period of Impact
Locel & Regionel					
Wilderness use	Increaeae	Locel employment	<1	People/ yeer	Long term
	Incraaeee	Local income	<5,000	Dollers/ yeer	Long term
Losaee of hunter end beck-country vahicla use	Decraaee	Locel employment	<1	People/ yaer	Long term
	Decreeae	Locel incoma	<1,000	Dollars/ year	Long term
Netionel					
Wildernass usa	Increaeee	Net value to ueare	<55,000	Dollers	Long tarm
Loseee of back-country vehicle uea	Decrease	Net velue to usars	<75,000	Dollers	Long term
Increaeed cost of wildlife projects	Decreeea	Net velue to consumers & producers	<10,000	Dollars	Long term

Alternative B - No Wilderness Designation
(No Action) (Preferred Alternative)

Acres recommended for designation - 0

Air

See General Section at the beginning of this chapter.

Geology and Minerals

Nondesignation would provide the possibility of minerals development within the unit. Development could occur under the guidance provided in the MFP. See General Sections at the beginning of this chapter.

Soils

See General Section at the beginning of this chapter and Appendix B.

Water

See General Section at the beginning of this chapter.

Range

No impacts.

Forestry

No impacts.

Wildlife

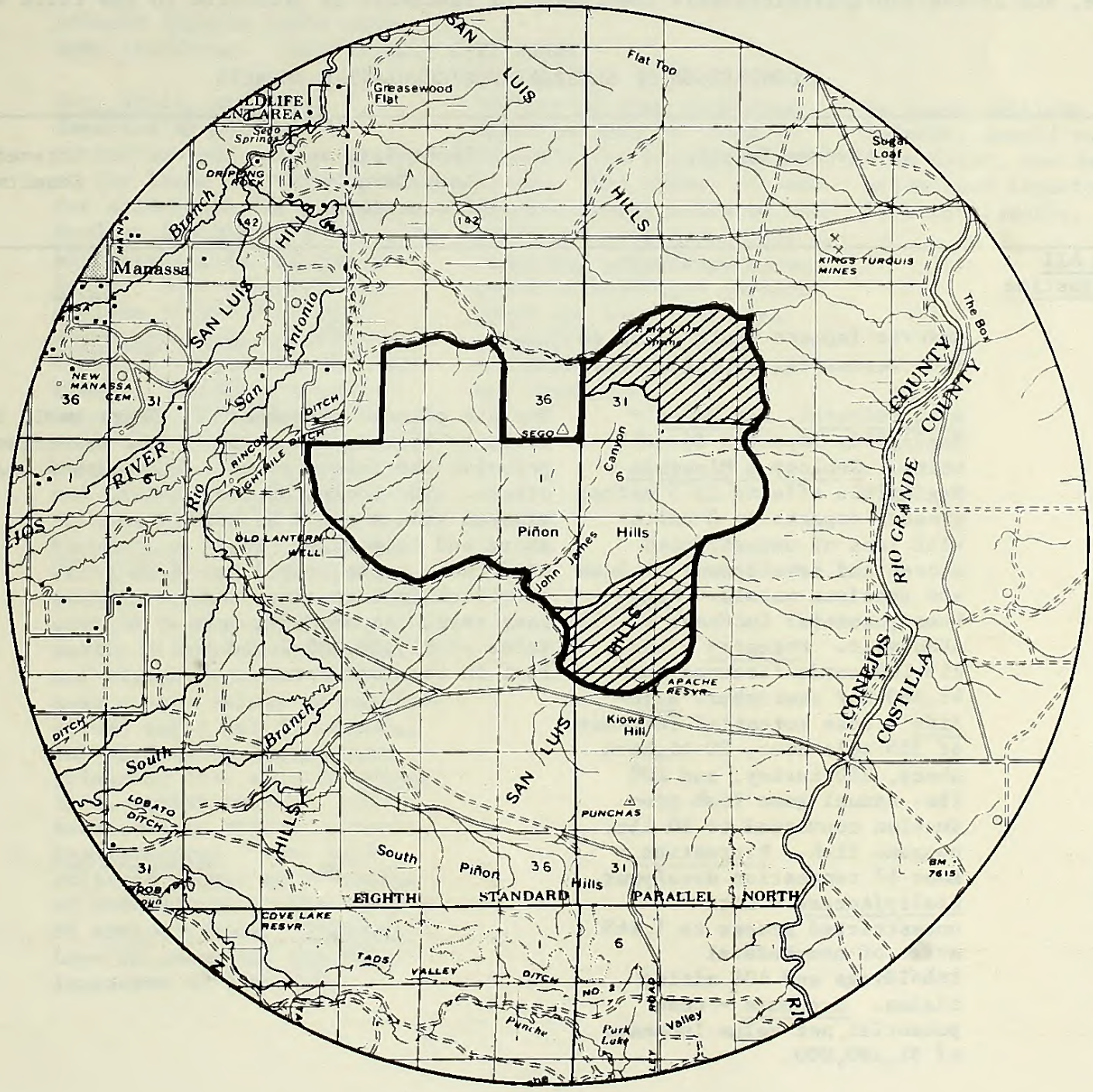
The planned water catchments would be completed. The corresponding short- and long-term benefits to mule deer would also occur.

Cultural

See General Section at the beginning of this chapter.

MAP IV - 8
SAN LUIS HILLS - ALTERNATIVE C

PORTIONS DELETED FROM
WILDERNESS RECOMMENDATION



Recreation/Visual

No impacts.

Wilderness

If this WSA is not designated wilderness, back-country vehicle use would be permitted and would detract from the opportunities for solitude. Additionally mineral development could possibly adversely impact the visual quality and naturalness of the unit.

Realty/Access

No impacts would result if unit is not designated wilderness. See General Section at the beginning of this chapter.

Social/Economic

Social - Please refer to General Section in the beginning of this chapter.

Economic - Only those values identified as gains due to designation (Alternative A) would be lost under this alternative.

Alternative C - Partial Wilderness Designation - I

Acres recommended for designation - 7,440

This alternative makes three boundary changes which improve manageability and eliminates a resource conflict with minerals.

Only those impacts that differ from those discussed in Alternative A will be addressed in this section. Refer to that alternative for a discussion of similar impacts on other resources.

Geology and Minerals

The boundary changes in this alternative omit the 99 mining claims existing in the unit. This would allow for the possibility of mineral development which could occur under guidance provided in the MFP. See General Section at the beginning of this chapter.

Wilderness

Mineral interest in areas omitted under this alternative is high. Therefore, there is the possibility of mineral development resulting in lost wilderness values in the portions of the unit not recommended for designation.

Alternative D - Partial Wilderness Designation - II

No second boundary change or modification was feasible for this WSA. See Chapter II for rationale supporting this conclusion.

An impact comparison of the Alternatives and resource elements by adverse impacts, short- term vs. long-term productivity use, and irreversible/irretrievable commitment of resources is presented in the table below.

TABLE IV-1

COMPARISON OF ALTERNATIVES/CUMULATIVE IMPACTS

Alternative	Adverse Impacts	Short-Term vs. Long-Term Productivity	Irreversible/Irretrievable Commitment of Resources
Alternative A - All Wilderness Designation	Adverse impacts would occur to some resources. Specifically: Air, Cultural, and Water - Negligibly impacted for all units. Geology & Minerals - Negligible effects in 5 units; greater impacts in 2 units with loss of unrestricted access and development of base and precious metals. Range - Lose potential increase of 655 AUMs/year. Forestry - Lose 259,106 cords firewood and 41,560 Mbf sawtimber. Wildlife - Lose potential increase of 555 mule deer, 20 bighorn sheep, 290 turkey, and 100 lbs. annual game fish production converted to 20 lbs. nongame fish. Recreation - Lose 17 recreation days/year. Realty/Access - Lose unrestricted access to 1,145 acres of non-Federal inholdings and 404 mining claims. Economic - Lose potential net value increase of $1,180,000.	The use of some resources would be lost in order to preserve the integrity of others. The losses of some mineral values could be both short and long term. The wilderness values could be benefited in both short and long term. An economic net value of $1,180,000 would be lost in the long term.	There would be no irreversible nor irretrievable commitments of resources under this alternative.

Comparison of Alternatives/Cumulative Impacts

Alternative	Adverse Impacts	Short-Term vs. Long-Term Productivity	Irreversible/Irretrievable Commitment of Resources
Alternative B - No Wilderness Designation	Adverse impacts would occur to some resources. Specifically:		
	Air, Soils, Water - Impacted by mineral extraction or timber harvest to varying degrees within the units. Recreation - Lose 17 recreation days/year. Visual quality could be potentially degraded to different degrees in the various units. Wilderness - Lose values in various portions of the units; primarily from mineral extraction, timber harvest and back-country travel. Economic - Lose direct gain of $822,000.	The use and preservation of resources would be lost in order to use some other resources. In the long term wilderness values could decline. In both short and long term mineral exploration and development could increase. An economic direct gain of $822,000 would be lost in the long term.	Should mineral extraction occur, the degradation of wilderness resource values could be irretrievable.
Alternative C - Partial Wilderness Designation - I	Adverse impacts would occur to some resources. Specifically:		
	Air, Soils, and Water - Impacted by mineral extraction and timber harvest on the lands not recommended for wilderness designation. Geology & Minerals - Negligibly affected in all units. Range - Lose potential increases of 608 AUMs/year. Forestry - Lose 231,474 cords firewood and 36,002 Mbf sawtimber. Wildlife - Lose potential increase of 450 mule deer, 280 turkey, 100 pounds annual game fish production and convert annually 20 pounds of game fish to nongame fish. Recreation - Lose 234 recreation days/year. Some visual quality would be lost on lands omitted from designation, primarily from mineral extraction and timber harvest. Wilderness - Lose values on portions of the units not recommended for wilderness designation, primarily from mineral extraction, timber harvest, and back-country vehicle travel. Realty/Access - Lose unrestricted access to 640 acres of non-Federal inholdings and 62 mining claims. Economic - Loss of potential net value increases of $861,000.	The use of some resources would be lost in order to preserve the integrity of others. The losses of some mineral values could be both short and long term. The remaining wilderness values could be benefited in both short and long term. An economic net value of $729,000 would be lost in the long term.	In those portions of the units deleted, should mineral extraction occur, the degradation of wilderness resource values could be irretrievable.

Comparison of Alternatives/Cumulative Impacts

Alternative	Adverse Impacts	Short-Term vs. Long-Term Productivity	Irreversible/Irretrievable Commitment of Resources
Alternative D - Partial Wilderness Designation - II Note: Beaver Creek is the only unit considered to have a 2nd Partial Alternative. Alternative D, other than for Beaver Creek, is the same as Alternative C.	Adverse impacts would occur to some resources. Specifically: Air, Soils, and Water - Impact by mineral extraction and timber harvest on the lands not recommended for wilderness designation. Geology & Minerals - Negligibly affected in all units. Range - Lose potential increases of 608 AUMs/year. Forestry - Lose 155,804 cords firewood and 36,002 Mbf sawtimber. Wildlife - Lose potential increase of 450 mule deer, 280 turkey, 100 pounds annual game fish production, and convert annually 20 pounds of game fish to nongame fish. Recreation - Lose 234 recreation days/year. Some visual quality would be lost on lands omitted from designation, primarily from mineral extraction and timber harvest. Wilderness - Lose values on portions of the units not recommended for wilderness designation, primarily from mineral extraction, timber harvest, and back-country vehicle travel. Realty/Access - Lose unrestricted access to 640 acres of non-Federal inholdings and 62 mining claims. Economic - Loss of potential net value increases of $844,000.	The use of some resources would be lost in order to preserve the integrity of others. The losses of some mineral values could be both short and long term. The remaining wilderness values could be benefited in both short and long term. An economic net value of $844,000 would be lost in the long term.	Should mineral extraction occur, the degradation of wilderness resource values could be irretrievable.

SUPPORT DATA

CONSULTATION AND COORDINATION

This part of the chapter will address the various efforts of BLM to consult or coordinate with the public or other agencies on wilderness.

Informal local consultation with various individuals, groups, and public agencies occurred during early data gathering stages of the planning process of the RGRA MFP specific to wilderness resources. The SLRA plans were completed prior to FLPMA in 1976 and did not consider wilderness values. Data was not specifically collected for this process.

Public comments received at various times in the RGRA-MFP planning process often were very general and in many cases stated preference only for more or less wilderness. Some specific comments were received and are stated or summarized under each particular WSA in the MSA. Comments were received during the wilderness inventory phase and early wilderness study phase (through November 1980). In addition during the preparation of the MSA, a scoping meeting and one series of open houses to consider alternatives were held. All input received is included in the final MSA. The next major facet of input into this process is the solicitation of comments on the DEIS.

LIST OF PREPARERS

This draft statement was prepared by 23 people within the BLM, Canon City District in Colorado. Names, assignment, education, and years of experience are listed below:

Name	Assignment	Education	Years of Experience
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Bev Neuben	Editor	On-job-training; formal training; sessions on English; grammar, letter writing, and format	11
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Barbara Schmalz	Social Economic	BA-History/Sociology/German MA-Sociology	10
Stuart Parker	Land Uses	BA-Economics	12
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Dave Hallock	Planning Review	BS-Forestry	7
Victoria Soumart	NEPA & CEQ Compliance	BUS-Anthropology/ Geography	5

DEIS MAILING LIST

Following is a list of groups and/or agencies who will receive a copy of the DEIS with a request for comments and input. Colorado Congressional delegation will be sent copies of the DEIS. All individuals who have requested information on the wilderness studies will receive a copy of the DEIS.

FEDERAL AGENCIES

Advisory Council on Historic Preservation

Department of Agriculture
- Forest Service
- Soil Conservation Service

Department of Energy

Department of the Interior
- U.S. Fish and Wildlife Service
- Bureau of Reclamation
- Geological Survey
- Bureau of Mines
- National Park Service

Environmental Protection Agency

Department of Defense
- U.S. Air Force

STATE AGENCIES

Governor's Clearing House - Colorado
Colorado Department of Natural Resources
Colorado Geological Survey
Colorado Division of Wildlife
Colorado Soil Conservation Board
Colorado Water Conservation Board
Colorado Board of Land Commissioners
Colorado Oil and Gas Conservation Commission
Colorado Division of Parks and Recreation
Colorado Division of Water Resources
Colorado Division of Mines
Colorado Division of Planning
Colorado Department of Local Affairs

LOCAL AGENCIES

Upper Arkansas Valley Council of Governments
Pikes Peak Area Council of Governments
Pueblo Council of Governments
San Luis Valley Council of Governments

Counties -
- Alamosa County
- Chaffee County
- Conejos County
- Costillo County
- Custer County
- El Paso County
- Fremont County
- Huerfano County
- Lake County
- Las Animas County
- Park County
- Pueblo County
- Rio Grand County
- Saguache County
- Teller County

Cities -
- Alamosa
- Antonito
- Buena Vista
- Canon City
- Colorado Springs

Florence
Fountain
Pueblo
Salida
Silvercliff
Westcliffe

INTERESTED ORGANIZATIONS/ GROUPS/COMPANIES

The Wilderness Society
The Colorado University Wilderness Study Group
Upper Arkansas Audubon Society
Fort Collins Sierra Club
Colorado Springs Sierra Club
Colorado Open Space Council
Colorado University Wilderness Society
Colorado Adventuring Company
Friends of the Earth
Pikes Peak Sierra Club
Wilderness Audre
Wilderness Experiences
Colorado Mining Association
Izaak Walton League
National Wildlife Federation
Colorado Cattleman's Association
Colorado Woolgrower's Association
National Resources Defense Council
Rocky Mountain Center on Environment
Trout Unlimited
Colorado Historical Society
Colorado Outward Bound
American Wilderness Alliance
Aspen Wilderness Workshop
Club 20
Colorado Association 4 WD Club
Colorado Mountain Club
Colorado Outfitter and Ranch Enterprise
Public Lands Institute
Wildlife Management Institute
Aquila Energy Co.
AMOCO Minerals Co.
Atlas Corp.
Gulf Oil Corp.
Mobile Oil Corp.
Texaco, Inc.
Shell Oil Co.
Conoco
Cleveland Petroleum
Exxon Corp.
Union Carbide Corp.
Metal Mules
Schwendiner Associates
Anschutz Corp.
AMOCO Products Co.
Atlantic Richfield Co.
Association of Professional Geological Scientists
Gemini Resources, Inc.
Standard Oil Co.
Sunoco Energy Development Co.
Red Mountain Clay Co.
Independent Petro Association of AM
Accent Energy Corp.
Harrison Western Corp.
ASARCO, Inc.
Continental Oil Co.
Sunedco
Kellogg Corp.
Inspiration Development Co.
Wexpro Co.
Cyprus Mines Corp.
Moly Corp, Inc.
Urania Exploration Inc.
U.S. Borax
AMOCO Production Co.

APPENDIX A - CRITERIA USED TO ANALYZE SUITABILITY AND NONSUITABILITY

The following criteria have been used to analyze the suitability or nonsuitability of each unit for recommendation as a wilderness area. They are consistent with the criteria published in the Wilderness Study Policy.

Manageability

The area must be capable of being effectively managed to preserve its wilderness character.

Public Comment

In determining whether an area is suitable or nonsuitable for wilderness designation, the BLM wilderness study process will consider comments received from interested and affected publics at all levels - local, state, regional, and national - with special consideration given to the involvement of those local people and institutions that would be most directly affected by designation of an area. Wilderness recommendations will not be based on a vote-counting majority rule system. BLM will develop its recommendations by considering public comment in conjunction with a full analysis of multiple resource and socio-economic values and uses of a wilderness study area.

Local and Regional Socio-Economic Effects

In determining suitability or nonsuitability of an area for wilderness designation, BLM will give special attention to any significant socio-economic effects, as identified through the wilderness study process, designation would have on local communities or surrounding regions.

Energy and Critical Mineral Resource Values

Recommendations as to suitability or nonsuitability of an area for wilderness designation will also reflect a thorough consideration of any identified or potential energy and cricital mineral resource values present which are capable of meeting domestic energy and critical mineral production needs and the extent to which wilderness management of such areas would be in the public interest.

Consistency with Other Plans

In determining whether an area is suitable or nonsuitable for wilderness designation, BLM will fully consider and document the extent to which the recommendation is consistent with officially approved and adopted resource-related plans of other Federal agencies, state and local governments, and Indian tribes (and the policies and programs contained in such plans), as required by FLPMA and the BLM planning regulations.

Impacts on Other Resources

The extent to which other resource values or uses of the area would be lost or adversely affected as a result of wilderness designation will be considered.

Impacts on Wilderness

Consideration will be given to the alternative use of the land under study if the area is not designated as wilderness and the extent to which the wilderness values of the area would be lost or adversely affected as a result of this use.

Evaluation of Wilderness Values

Consideration will be given to the extent of which each of the following components contributes to the overall value of an area for wilderness purposes:

1. Mandatory wilderness characteristics: Quality of the mandatory wilderness characteristics of the area - size, naturalness, and outstanding opportunities for solitude or primitive recreation.

2. Special features: The presence or absence, and the quality, of the following optional wilderness characteristics - ecological, geological, or other features of scientific, educational, scenic, or historical value.

3. Multiple resource benefits: The benefits to other multiple resource values and uses which wilderness designation of the area could ensure.

Diversity in the National Wilderness Preservation System

Consideration will be given to the extent of which wilderness designation of the area under study would contribute to expanding the diversity of the National Wilderness Preservation System on (1) a statewide basis, (2) a regional basis, or (3) a national basis, from the standpoint of each of the factors listed below:

1. Expanding the diversity of natural systems and features, as represented by ecosystems and landforms.

2. Expanding the opportunities for solitude or primitive recreation within 1 day of driving time (5 hours) of major population centers.

3. Balancing the geographic distribution of wilderness areas.

APPENDIX B - SOIL ASSOCIATIONS BY WSAs

WSAs	Soil Associations	Parent Material	Soil Depth	Water Holding Capacity	Permeability	Surface Runoff	Erosion Susceptibility
Browns Canyon Unit 002	Rockland-Rock outcrop	N/A	Very Shallow	Low	Moderate	Rapid	Moderate
	Dominson-San Isabel	Eolian sands	Shallow	Low	Rapid	Slow to rapid	Slight to severe
McIntyre Unit 013 Lower Grape Beaver Creek Unit 016	Ustic Torriorthents-Rock outcrop	Residuum	Shallow	Low	Moderate to rapid	Rapid	Very high
McIntyre Unit 013 Lower Grape Unit 014	Boyle-Rock outcrop-Cathedral	Residuum & colluvium	Shallow	Very low	Moderate to rapid	Rapid	High to very high
McIntyre Unit 013 Beaver Creek Unit 016	Raleigh-Wetmore-Rock outcrop	Gneiss & grandorite	Shallow	Very low	Rapid to moderately rapid	Rapid	Very high
Lower Grape Unit 014	Brownsto-Martinsdale-Amalia	Alluvium & colluvium	Deep	Low to high	Moderate to moderately slow	Slow to rapid	Slight to very high
Lower Grape Unit 014 Beaver Creek Unit 016	Granite-Seitz Larand	Residuum colluvium	Deep	Low to moderate	Slow to moderate	Medium to very rapid	Moderate to very high
	Sedillo-Quazo-Rock outcrop	Residuum & colluvium	Shallow & deep	Low to very low	Moderate	Slow to rapid	Moderate to very high
Beaver Creek Unit 016	Cold Creek-Rock outcrop-Kutler	Acid igneous rock	Deep and moderately deep	Low to moderate	Moderate to rapid	Moderate to rapid	Moderate to high
Sand Castle Unit 135	Duneland	Eolian deposits	Shallow	Very low	Very rapid	Slow	Very severe
	Cotopaxi - Duneland	Eolian deposits	Deep	Very low	Rapid to very rapid	Very slow	Very severe
San Luis Unit 141	Travelers-Garita	N/A	N/A	Very low	Very slow to moderate	Medium to rapid	Moderate to high
Upper Grape Unit 017	Boyle-Cathedral	Residuum & collivium	Shallow	Very low	Moderate to rapid	Rapid	High to very high

APPENDIX C-1 - THE RECREATION OPPORTUNITY (ROS) SPECTRUM CLASS DESCRIPTIONS

Each of the six ROS classes is described in terms of: (1) experience opportunities; (2) setting opportunities; and (3) activity opportunities. These descriptors provide a general overview of the opportunities included in each class. These overview statements do not describe each class in detail, but rather provide a point of departure from which the planner or manager can develop more precise prescriptions for each class based on specific situations encountered in field operations. The listing of activity opportunities is provided for illustrative purposes. It is not an all-inclusive list of activity opportunities on the public lands.

Opportunity Class	Experience Opportunity	Setting Opportunity	Activity Opportunity
Primitive	Opportunity for isolation from the sights and sounds of man, to feel a part of the natural environment, to have a high degree of challenge and risk, and to use outdoor skills.	Area is characterized by essentially unmodified natural environment of fairly large size. Concentration of users is very low and evidence of other users is minimal. The area is managed to be essentially free from evidence of man-induced restrictions and controls. Only facilities essential for resource protection are used. No facilities for comfort or convenience of the user are provided. Spacing of groups is informal and dispersed to minimize contacts between groups. Motorized use within the area is not permitted.	Camping, hiking, climbing, enjoying scenery or natural features, nature study, photography, spelunking, hunting (big game, small game, upland birds, waterfowl), ski touring and snowshoeing, swimming, diving (skin and scuba), fishing, canoeing, sailing, and river running (nonmotorized craft).
Semiprimitive Nonmotorized	Some opportunity for isolation from the sights and sounds of man, but not as important as for primitive opportunities. Opportunity to have high degree of interaction with the natural environment, to have moderate challenge and risk, and to use outdoor skills.	Area is characterized by a predominantly unmodified natural environment of moderate to large size. Concentration of users is low, but there is often evidence of other area users. On-site controls and restrictions may be present, but are subtle. Facilities are provided for the protection of resource values and the safety of users only. Spacing of groups may be formalized to disperse use and limit con-	Camping, hiking, climbing, enjoying scenery or natural features, nature study, photography, spelunking, hunting (big game, small game, upland birds, waterfowl), ski touring and snowshoeing, swimming, diving (skin and scuba), fishing, canoeing, sailing, and river running (nonmotorized craft).

THE RECREATION OPPORTUNITY SPECTRUM CLASS DESCRIPTIONS - Continued

Opportunity Class	Experience Opportunity	Setting Opportunity	Activity Opportunity
		tacts between groups. Motorized use is not permitted.	
Semiprimitive Motorized	Some opportunity for isolation from the sights and sounds of man, but not as important as for primitive opportunties. Opportunity to have high degree of interaction with the natural environment, to have moderate challenge and risk and to use outdoor skills. Explicit opportunity to use motorized equipment while in the area.	Area is characterized by a predominantly unmodified natural environment of moderate to large size. Concentration of users is low, but there is often evidence of other area users. On-site controls and resrictions may be present, but are subtle. Facilities are provided for the protection of resource values and safety of users only. Spacing of groups may be formalized to disperse use and limit contacts between groups. Motorized use is permitted.	Same as above, plus the following: ORV Use-4WD, dune buggy, dirt bike, snowmobile, and power boating.
Roaded Natural	About equal opportunities for affiliation with other user groups and for isolation from sights and sounds of man. Opportunity to have a high degree of interaction with the natural environment. Challenge and risk opportunities are not very important except in specific challenging activities. Practice of outdoor skills may be important. Opportunities for both motorized and nonmotorized recreation are present.	Area is characterized by a generally natural environment with moderate evidence of the sights and sounds of man. Resource modification and utilization practices are evident, but harmonize with the natural environment. Concentration of users is low to moderate with facilities sometimes provided for group activity. On-site controls and restrictions offer a sense of security. Rustic facilities are provided for user convenience as well as for safety and resource protection. Conventional motorized use is provided for in construction standards and design of facilities.	All activities listed previously plus the following: picnicking, rock collecting, wood gathering, auto touring, downhill skiing, snowplay, ice skating, water skiing and other water sports, hang gliding, interpretive use, rustic resorts, and organized camps.

THE RECREATION OPPORTUNITY SPECTRUM CLASS DESCRIPTIONS - Continued

Opportunity Class	Experience Opportunity	Setting Opportunity	Activity Opportunity
Rural	Opportunities to experience affiliation with individuals and groups are prevalent as is the convenience of sites and opportunities. These factors are generally more important than the natural setting. Opportunities for wildland challenges, risk taking, and testing of outdoor skills are unimportant, except in those activities involving challenge and risk.	Area is characterized by substantially modified natural environment. Resource modification and utilization practices are obvious. Sights and sounds of man are readily evident, and the concentration of users is often moderate to high. A considerable number of facilities are designed for use by a large number of people. Facilities are often provided for specific activities. Developed sites, roads and trails are designed for moderate to high use. Moderate densitites are provided for away from developed sites. Facilities for intensive motorized use are available.	All activities listed previously plus the following: competetive games, spectator sports, bicycling, jogging, outdoor concerts, and modern resorts.
Modern Urban	Opportunities to experience affiliation with individuals and groups are prevalent as is the convenience of sites and opportunties. Experiencing the natural environment, and the use of outdoor skills are largely unimportant.	Area is characterized by a highly modified environment, although the background may have natural elements. Vegetation is often exotic and manicured. Soil may be protected by surfacing. Sights and sound of man, onsite, predominate. Large numbers of users can be expected. Modern facilities are provided for the use and convenience of large numbers of people. Controls and restrictions are obvious and numerous. Facilities for high intensity motor use and parking are present with forms of mass transit often available.	All activities listed previously.

APPENDIX C-2 - PERCENT OF TOTAL WSA IN EACH RECREATION OPPORTUNITY CLASS

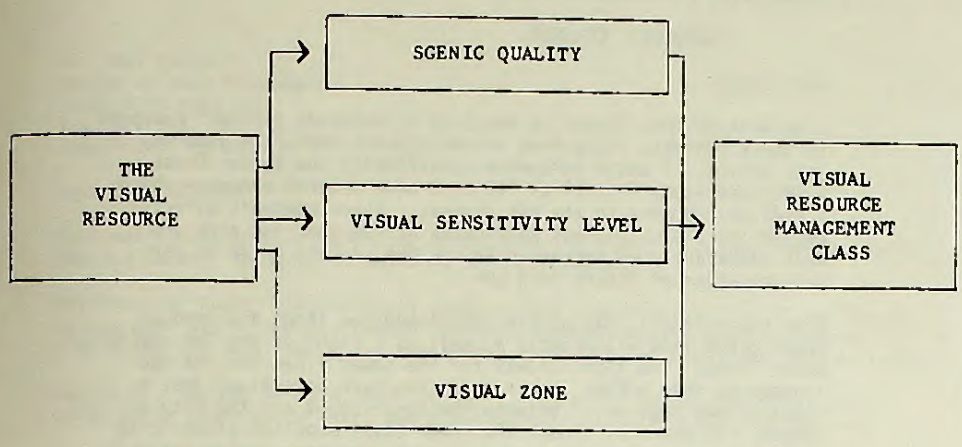
ALTERNATIVE	Browns Canyon P	Browns Canyon SPNM	Browns Canyon SPM	Browns Canyon R	McIntyre Hills P	McIntyre Hills SPNM	McIntyre Hills SPM	McIntyre Hills R	Lower Grape Creek P	Lower Grape Creek SMNM	Lower Grape Creek SPM	Lower Grape Creek R
A - All Wilderness Designation	-	100	-	-	-	100	-	-	-	100	-	-
B - No Wilderness Designation (No Action) (manage under MFP guidance)	-	61	39	-		35	47	18	-	- 56	87* 31	13* 13
C - Partial Wilderness Designation - I	--------NA----------					71	11	18	-	67	20	13
D - Partial Wilderness Designation - II	--------NA----------				----------NA----------				----------NA----------			

ALTERNATIVE	Beaver Creek P	Beaver Creek SPNM	Beaver Creek SPM	Beaver Creek RN	Upper Grape Creek P	Upper Grape Creek SPNM	Upper Grape Creek SPM	Upper Grape Creek RN	Sand Castle P	Sand Castle SPNM	Sand Castle SPM	Sand Castle RN	San Luis Hills P	San Luis Hills SPNM	San Luis Hills SPM	San Luis Hills R
A - All Wilderness Designation	47	53	-	-	-	100	-	-	-	100	-	-	-	100	-	-
B - No Wilderness Designation (No Action) (manage under MFP guidance)	47	33	18	2	-	31	89 58	11 11	-	80	20	-	-	-	75	25
C - Partial Wilderness Designation - I	47	36	11	6	-	94	6	-	-	80	20	-	-	75	12	13
D - Partial Wilderness Designation - II	47	25	23	6	---------NA---------				--------NA--------				--------NA--------			

* - Applies only if management decides to accept recreation proposals if the area is not designated wilderness.

P - Primitive
SPNM - Semiprimitive nonmotorized
SPM - Semiprimitive motorized
R - Roaded natural

APPENDIX D - THE VRM PROCESS



DEFINITIONS

Visual resource: The land, water, vegetative, animal, and other features that are visible on all lands (scenic values). The resource contains the four basic elements of form, line, color, and texture.

Distant zone: The area that can be seen as foreground-middleground, background, or seldom-seen.

Sensitivity: As applied to visual resource management, that degree of concern expressed by the user toward scenic quality and existing or proposed visual change in a particular characteristic landscape.

Scenic quality class: The value (A, B, or C) assigned a scenic quality rating unit by applying the scenic quality evaluation key factors which indicate the relative visual importance of the unit to the other units within the physiographic region in which it is located.

Visual resource management class: The degree of visual change that is acceptable within the characteristic landscape. It is based upon the physical and sociological characteristics of any given homogeneous area and serves as a management objective.

A. Class I. This class provides primarily for natural ecological changes only. It is applied to primitive areas, some natural areas, and other similar situations where management activities are to be restricted.

B. Class II. Changes in any of the basic elements (form, line, color, texture) caused by a management activity should not be evident in the characteristic landscape.

C. Class III. Changes in the basic elements (form, line, color, texture) caused by a management activity may be evident in the characteristic landscape. However, the changes should remain subordinate to the visual strength of the existing character.

D. Class IV. Changes may subordinate the original composition and character but must reflect what could be a natural occurrence within the characteristic landscape.

E. Class V. Change is needed. This class applies to areas where the naturalistic character has been disturbed to a point where rehabilitation is needed to bring it back into character with the surrounding countryside. This class would apply to areas identified in the scenery evaluation where the quality class has been reduced because of unacceptable intrusions. It should be considered an interim short-term classification until one of the other objectives can be reached through rehabilitation or enhancement. The desired visual quality objective should be identified.

Chart for Determining Visual Resource Management Class

		2/ VISUAL SENSITIVITY LEVEL						
			HIGH		MEDIUM			LOW
SPECIAL AREAS		I	I	I	I	I	I	I
1/ SCENERY CLASS	A	II	II	II	II	II	II	II
	B	II	III	III & IV	III	IV	IV	IV
	C	III	IV	IV	IV	IV	IV	IV
		FG	BG	SS	FG	BG	SS	SS
		3/ VISUAL ZONES						

1/ SCENERY QUALITY INVENTORY: A, B, C

2/ VISUAL SENSITIVITY LEVEL: High, Medium, Low

3/ VISUAL ZONES: FG - Foreground-Middleground
BG - Background
SS - Seldom Seen

4/ If the area being evaluated is adjacent to any VRM Class III or higher, select Class III; if lower select VRM Class IV.

Note: Class I applies only to classified special areas, e.g., Wilderness, Primitive, Natural Areas, etc. This quality standard is established through legislation or policy.

Class V applies to areas identified in the scenery quality inventory where the quality class has been reduced because of unacceptable intrusions.

APPENDIX E - CONSISTENCY WITH OTHER PLANS

The following excerpted/paraphrased statements and letters present the concerns of other public entities with planning responsibilities relating to the BLM wilderness review process.

Fremont County comprehensive plan 1976 states that, "Fremont County should attempt to maintain the integrity of its natural and agricultural environment. The openness and naturalness of the county is its most important asset. Development in the county should be of a high quality so as not to diminish the attractiveness of the natural environment."

Chaffee County comprehensive plan (1971) revision 1976 states:

A. Goals on public recreation are:

1. Maintenance of the environment in its natural state.

2. Regulation of potential developments in scenic areas.

3. Protect vegetation, wildlife migration routes and wintering areas, stream quality, mountain valley and slopes, their accessibility, and use as a resource . . . to maintain natural and economic viability as a recreationally attractive entity.

B. Goals for growth:

1. To arrange for compatible land use.

2. To protect the ranching economy by preserving the existing agricultural areas.

3. To develop the tourism and recreation potential of the county.

El Paso County Land Development Code as amended in 1980 states that the purpose of the Forest District and the Forest and Recreation District zones is to efficiently use land to conserve forest resources, protect the natural environment, and preserve open space.

The 1981 Colorado Outdoor Recreation Plan recommends that BLM continues to provide dispersed recreation and report on suitability of areas as wilderness for congressional designation.

The plan contains activity need/significance indication rankings that can be used to related wilderness demand.

Statewide: High 13/18

Region 4 (Park, Teller, and El Paso): High 13/18

Region 8 (Saguache, Mineral, Rio Grange, Alamosa, Conejos, and Costilla): Medium 11/18

Region 13 (Lake, Chaffee, Fremont, and Custer): High 14/18

These are average rankings based on six individual activity categorial rankings: back-country camping, nature study, hunting, fishing, horseback riding, and cross country skiing. Points are assigned as 3 for high, 2 for medium, and 1 for low; this would be out of a possible 18 maximum.

CITY OF COLORADO SPRINGS
COLORADO 80947
P.O. BOX 1103
DEPARTMENT OF PUBLIC UTILITIES
WATER ELECTRIC GAS SEWER

UTILITIES BUILDING
18 S. NEVADA AVE

TELEPHONE
636-5358

July 23, 1979

Mr. Jack O. Albright
Bureau of Land Management
Post Office Box 1470
Canon City, CO 81212

SUBJECT: CO-0036

Dear Jack:

I am writing this letter as the City of Colorado Springs' response to the Wilderness Study Area review process currently underway in your office. I would reference specifically the Beaver Creek Wilderness Study Area (Area 016). I have several comments which I feel are germane to the WSA process. These comments directly reflect on the wilderness attributes of the specific area and must necessarily be addressed in the WSA process prior to any determination of future land use.

Area 016 currently has within its boundaries lands designed as power plant land withdrawals as well as a right-of-way for electric power lines. The right-of-way for the power lines has not been located by this office, however, it has been determined that a right-of-way does exist between the power plant and the City of Pueblo. It seems as though the power plant supplied electricity to Pueblo to run the electric mass transportation system early in this century. The power plant land withdrawals as shown on the BLM planometric maps must be assumed to continue to exist for that purpose as we can find no documentation as to a subsequent land use determination.

Boundaries for WSA 016 appear to be gerrymandered to exempt any type of human impact. This gerrymandering of boundaries is so extensive as to completely negate the concept of natural boundaries i.e., watersheds, ridge lines, etc. BLM property lines, county boundary lines, etc., were used in determining the extent of Area 016. Any form of human impact was conveniently circumvented and many forms do exist immediately adjacent to as well as within these boundaries.

R.G.R.A.
JUL 26 1979

Area 016 is a partial watershed. This, in effect, means that the BLM has no control over water quality or quantity in the Beaver Creek area. A review of existing wilderness areas in Colorado shows that each and every wilderness area has complete watersheds within their boundaries. Some partial watersheds were found in this review, however, these watersheds were only a small part of a larger wilderness area which had within its boundaries complete watersheds. It seems as though the Forest Service is concerned with naturalness in terms of boundaries as evidence by the extensive use of watershed boundaries as wilderness boundaries.

The management and administration of mineral resources in particular energy related mineral resources, is a major charge of the Bureau of Land Management. Mineral resources in Area 016 apparently do exist in economic concentrations. The United States Geologic Survey as well as the Colorado Geological Survey identify portions of Area 016 as containing economic and subeconomic reserves of uranium. In light of the nation's current energy situation, it seems as though a thorough review of mineral resources in the Beaver Creek area is a necessity.

There are several existing roads in Area 016 and one road in particular which bisects Area 016 from the north to the south. A couple of these roads including the bisecting road fall within the definition of a road under the law. There appears to be a major concern with the existing roads in the area and its direct impact on solitude and naturalness.

In conclusion, I would like to reiterate the City's position in regards to the land use designation of this area. Colorado Springs will support land use controls to guarantee or preserve the existing state of the land short of Wilderness designation. The area is clearly not of a wilderness quality; however, it possesses many of the wilderness attributes and should be preserved for non-motorized recreational uses.

Sincerely yours,

R. F. Kuharich
Resources Planning & Development

RFK/smc

cc: James D. Phillips, Director, Department of Public Utilities
Tad Foster, Deputy City Attorney
Dale R. Andrus, Director, Bureau of Land Management

Conejos County

Board of County Commissioners

Conejos, Colorado 81129

Dale Sowards, Chairman

August 27, 1981

Joe R. Casias
Richard Duran

Mr. Dave Hallock
Bureau of Land Management
Canon City District
P.O. Box 311
Canon City, CO 81212

Dear Mr. Hallock:

Enclosed please find a resolution adopted by the Board of County Commissioners, Conejos County, Conejos, CO which is self-explanatory.

The Board of County Commissioners gave careful consideration to the recommendations made by the Conejos County Planning Commission, the Land Use Administrator and the many county residents that approached us regarding this matter.

Again, Mr. Hallock we as a board strongly oppose the inclusion of San Luis Hills a/k/a Pinon Hills into the National Wilderness Preservation System.

Sincerely,

Dale Sowards

Dale Sowards, Chairman
Board of County Commissioners
Conejos County

cc: file
Conejos County Planning Commission

encl: Resolution

USDI BLM
Canon City, Colo.
AUG 23 '81

BEFORE THE BOARD OF COUNTY COMMISSIONERS
OF THE COUNTY OF CONEJOS

Re: Inclusion in National Wilderness Preservation System

WHEREAS, the Board of County Commissioners for Conejos County, having been advised by the Canon City District of the Bureau of Land Management, that said Bureau of Land Management is in the process of amending the Royal Gorge, Saguache, and San Luis Management frame work plans; and,

WHEREAS, the Board of County Commissioners of Conejos County having been further advised that the San Luis Hills, also known as the Pinon Hills, is presently under study for its suitability for wilderness designation and inclusion into the National Wilderness Preservation System; and,

WHEREAS, the Board of County Commissioners strongly opposes the inclusion of said San Luis Hills, a/k/a Pinon Hills area in the National Wilderness Preservation System for the following reasons:

1. That the inclusion of said area will have an adverse socio-economic impact on the County's fiscal management, as well as on the benefits accruing to citizens and residents within Conejos County, and furthermore, frustrates the continuing development and economic security of Conejos County in so far as residents of Conejos County reap substantial economic benefit from said land in the form of wood gathering, domestic animal graring and general agricultural development.

2. That in light of the economic depression existing within Conejos County (said county having a total assessed valuation of $15,792,488.00), that said designation would hamper any growth, industrial or otherwise, which would enhance the economic viability of the County.

3. That the Board of County Commissioners is informed and advised that the area in question contains potential mineral

resource, as well as potential energy development resources, which resources would lend themselves to further exploration and would enhance the financial and economic growth of both the county government and the residents of said county.

4. That the Board of County Commissioners has adopted a master plan for its land use administration in Conejos County, and that the proposed inclusion may not, or is not compatible with said master comprehensive plan.

NOW THEREFORE, in consideration of the foregoing, it is resolved that the Board of County Commissioners of Conejos County strongly opposes the inclusion of San Luis Hills, also known as the Pinon Hills, in the National Wilderness Preservation System.

DATED this 14th day of August, 1981.

BOARD OF COUNTY COMMISSIONERS
OF CONEJOS COUNTY

By Dale Sowards
Dale Sowards, Chairman

ATTEST:

Ernie Salazar
Clerk of the Board

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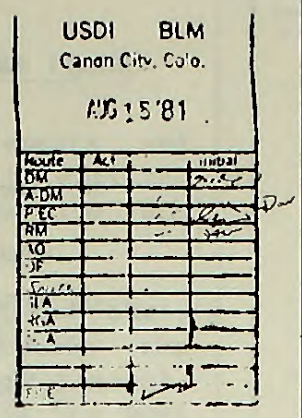

August 17, 1981

Melven D. Clausen
Oistrict Manager, BLM
3080 E. Main, P.O. Box 311
Canon City, Colo. 81212

Oear Mr. Clausen,

We thank you for the opportunity to commnet on BLM's Wilderness Study Areas in Saguache County.

Saguache County does not have an adopted Comprehensive Plan. However, the County has adopted some "Policies on Intergovernmental Coordination" which state our position on wilderness designations. I've included these policies - see # 1, 2,3,5,7-C, and 12 for the issues that affect wilderness designation.

If you should have any questions, feel free to contact us.

Sincerely,

Kevin Nichols
Land Use Administrator

KN:ka

Enclosure

cc: Gene Vecchia, Area BLM Manager
Saguache County Commissioners

SAGUACHE COUNTY POLICIES ON
INTERGOVERNMENTAL COORDINATION

1. Public lands should be managed under the "multiple use" concept; all existing uses of state and federal lands shall be preserved unless it is clearly undesirable from a economic and environmental standpoint.

2. The County will not agree to any wilderness designation without a thorough analysis of the impact on the local economy, recreational opportunities, and future mineral resource development.

3. Present vehicular access to all areas of the County which are of agricultural, recreational, silvicultural, commercial, firewood gathering importance should be maintained provided that such access does not become detrimental to emvironmental resources.

4. New roads through state and federal lands should only be open to the traffic necessary for use of the land. For example, new access to a timber lease should only be open to use by timber industry vehicles and emergency vehicles. The purpose of this policy is to reduce necessary road maintenance.

5. Prior to any "major change" in state or federal land use, the appropriate agency shall meet with the County Commissioners to discuss possible environmental and economic impacts. "Major Changes" include: road closures, closing an area to hunting and fishing, wilderness designations, or changing from one major land use to another (i.e. - from grazing to recreation).

6. Saguache County supports land purchases which will not significantly reduce property tax revenue or reduce the economic opportunities . available to County residents.

7. Oue to the importance of the livestock industry's use of public land to the economy of Saguache County:

   A. Present range management practices such as rotational or deferred grazing, proper salting and riding, and necessary range improvements should be encouraged and improved.

   B. State and federal land managers, permitees, and lessees should be encouraged to coordinate any changes in grazing or allotment plans.

   C. Changes in AMU's should not be unilateral and permitees/lessees should be given the opportunity to present their own expert testimony.

   D. State and federal revenue gathered from leasing range land should be used to maintain or increase AMU's where economically and environmentally feasible. Measures which such revenue should be used for include grass seeding, shelter belts, erosion control, and noxious weed control.

8. State and federal land management agencies are encouraged to provide a wide range of recreational opportunities provided that range lands important to the County economy are not diminished, and environmental resources are not destroyed.

9. Whenever possible, timber stands shall be managed on a "sustained yield" basis provided that water quality and important wildlife habitats are not damaged.

10. The County is not opposed to properly conducted clearcutting which increases water yield, enhances the mix of wildlife, and has a minimal visual impact. However, such operations should not damage nearby water quality and the health of nearby tree stands.

11. When considering the reforestation of fire damaged forest land, state and federal agencies should examine the impact on the local economy and ecosystem (i.e. - burned forest land which has become grassland, and is used by local residents for grazing).

12. Mining operations on state and federal lands should be allowed if impact on water quality and wildlife habitats are kept to a minimum, visual impact is minimal, and the developer agrees to "pay his own way" in terms of any County services which might be required.

13. State and federal land management officials should meet with the Board of County Commissioners on an annual basis to designate areas within state and federally managed land which could be used for County landfills, gravel extraction (for use on county maintained roads through federal land), camping facilities and firewood gathering.

THE [illegible]
Gary T. Suiter, Administrative Assistant
Tel: 589-4848

BOARD OF ALAMOSA COUNTY COMMISSIONERS
Post Office Box 178 Tel: 589-3841
Alamosa, Colorado 81101

USDI BLM
Canon City, Colo.
FEB 05 '82

Route	Act	Ini	Initial
DM			
A-DM			
RM			
OPEN			
ADMIN			
PE-EA			
GLRA			
ROMA			
NERA			
ACTING			
FILE			

EWIS H. ENTZ, District No. 1
Chairman

PHILLIP M. LORTON, District No. 2

TIMOTHY GALLAGHER, District No. 3

February 1, 1982

Bureau of Land Management
Canon City Oistrict Office
3080 E Main - P. O. Box 311
Canon City, CO 81212

ATTN: Mr. Ken Smith
Wilderness Specialist

Oear Mr. Smith:

Pursuant to our January 28, 1982, telephone conversation, the Board of Alamosa County Commissioners hereby submit their concerns regarding the proposed wilderness designation area, No. CO-050-135, Sand Castle Wilderness Study Area.

Having been previously involved in wilderness area issues, the Commissioners have compiled a list of reasons opposing the designation of wildnerness areas, as expressed by various individuals and groups within Alamosa County. Among these reasons, the following were the most prominent:

-- The greatest good for the greatest number of people would be derived from the continuation and expansion of the "Multiple Use Concept" as administered by the United States Forest Service over the past several years.

-- Wilderness designation restricts the use of our national forests to a minute segment of the population, prevents the aged, infirmed, handicapped and low income and poverty level citizens from enjoying the national forests.

-- Wilderness designation precludes an adequate program of preservation, restoration and maintenance of anotherwise renewable natural resource. Fire cannot be adequately controlled in a wilderness area. Proper management requires that aged and dead trees be removed from the forest and tree stands should be thinned to allow maximum growth of selected

trees and reseeding the growth to perpetuate the renewal of the forest

-- In the arrid western parts of the United States, water development and conservation and management practices should be carried on in the forests to conserve water and provide for the most efficient use of the water. It is the contention of the citizens in this area that the forest service should develop and administer a program to build and maintain a large number of catch basins and holding tanks to regulate the run-off of water into the rivers and their tributaries so that 90% of the water available water is not sent down stream in 60 days, but is allowed to run 90 to 120 days

-- Wilderness designation prevents the maximum utilization of forage for livestock

-- Timber is a renewable resource and every effort should be made to utilize this natural resource and provide for perpetual renewal of forests for future generation. Wildnerness designation prohibits such a program

-- Mineral resources and forest lands should be developed for the good of all the citizens of the United States, but wilderness designation prevents this.

The Rio Grande National Forest and all national forests in Colorado can and should be utilized to provide timber, minerals, water conservation, grazing, wildlife habitat and recreation for all citizens in perpetuity. Multiple use management can provide for full utilization of these natural resources, but wilderness designation prevents such development and utilization.

Respectfully submitted:

BOARO OF ALAMOSA COUNTY COMMISSIONERS

Gary T. Suiter
Administrative Assistant

GTS/jlw

GLOSSARY

Allotment Management Plan (AMP). A concisely written program of livestock grazing management, including supportive meaaures, if required, designed to attain specific management goals in a grazing allotment.

Acre-Foot. A unit for measuring volume, equal to the quantity of water or other material required to cover 1 acre to a depth of 1 foot or a volume of 43,560 cubic feet.

Alluvium. Unconsolidated rock or soil material depoaited by running water, including gravel, sand, silt, clay, and various mixtures of these.

Animal Unit Month (AUM). The forage needed to support one cow, one horse, or five sheep for a month or one elk, five deer, or five antelope for the same period of time (1800 lbs./AUM on a 50 percent utilization basis).

Anomalous. Deviating from the normal or common order.

Aquatic. Living or growing in or on the water.

Back-country Vehicle. Any motorized vehicle for cross-country travel over land, water, sand, snow, ice, marsh, swampland, or other terrain.

Class II Air Quality. Moderate additional deterioration in air quality (most BLM lands).

Clean Air Act, as amended by 1977. An act giving EPA the overall responaibility to protect air quality and to set ambient/emission standards. It also gives each state the primary responsibility to meet the standards through the development and implementation of a state implementation plan.

Contiguous. Lands or legal subdivisions having a common boundary; lands having only a common corner are not contiguous.

Cultural Resources. Those fragile and nonrenewable remains of human activity, occupation, or endeavor, reflected in districts, sites, structures, buildings, objects, artifacts, ruins, works of art, architecture, and natural features, that were of importance in human events.

Endangered Species. Any species which in in danger of extinction throughout all or a significant portion of its ranges.

Environmental Assessment (EA). A report analyzing the impacts of some proposed action on a given environment. It is similar to an environmental impact statement (EIS) except it is generally smaller in scope and makes recommendations for action. EAs are sometimes preliminary to EISs.

Eolian. Pertaining to, caused by, or carried by the wind.

Ephemeral. Something short-lived or transitory.

Eroaion. The process by which soil particles are detached and moved.

Forb. Herbaceous plants neither grass nor resembling grasa.

Gneiss. A banded or foliated metamorphic rock, usually of the same composition as granite, in which minerals are arranged in layers.

Graben. An umusually elongated depression of the earth's crust between two parallel faults.

Habitat. A specific set of physical conditions that surround the single species, a group of species, or a large community. In wildlife management, the major components of habitat are considered to be food, water, cover, and living space.

Habitat Management Plan (HMP). A written and approved sctivity plan for a geographical area of public landa identifying wildlife habitat management actions to be implemented in achieving specific objectives related to planning document decisions.

Imprint. A mark or evidence left by man.

Inholding. Non-Federal lands surrounded by a WSA.

Intensive Manaement. A program of action designed to secure the best practicable use of the forage resources by the manipulation of livestock grazing to accomplish a desired rasult.

Intrusion. A feature (land and water form, vegetation, or structure) which is generally considered out of context with the characteristic landscape.

Manaement Framework Plan (MFP). Land use plan for public lands which providas s set of goals, objectives, and constraints for a specific planning area to guide the development of detailed plana for the management of aach resource.

Management Situation Analysis (MSA). An analysis by tha Buresu of Land Management, used for making land management decisions that are responsive to public issues, to determine the capability of public land resources.

Mbf. Thousand board feet.

Opersble Acres. Productive forast land on slopes of 35 percent or lass that has no rastrictiona placed on it that would precluds timbar harvesting.

Outstanding. Standing out among others of its kind; conspicuous; prominent. Superior to others of its kind; distinguished; excellant.

Pegmatits. A coarse-grained igneous rock, large grsnite, sometimes rich in rars slements such as uranium, tungsten, and tantalum.

Permeability. The condition of baing porous; containing openings or intarsticas through which outside propertias can pass.

Pinon-juniper Manipulation. Any altering of pinon-juniper woodland stands (i.e. controlled burns, firewood cutting) where an objective is being met. Examples of objectives could be removing mature trees to releaae young trees or to increase forage production for livestock or wildlife.

Productive Forast Land (PFL). Forest land which is producing or capable of producing 20 cubic feet of wood per acre per year.

Public Land. Land administered by the Bureau of Land Management.

Raptor. Bird of prey.

Recreation Days (Annual) - For the purpose of this assessment, annual recreation days were calculated using the following formula:

Ave. Daily Visits x Duration Spent Participating in Activities (in hours) ÷ 12 (hours) x Length of Season (days)

Recreation Opportunity Spectrum (ROS). A classification system developed for use in rating recreation experience opportunities.

Recreation Visit. The entry on one person into a specific area or site for purposes of engaging in one or more recreation activity.

Residuum. Something remaining after removal of a part.

Rotation Age. The age at which a crop of timber reaches the specific condition of either economic or natural maturity and should be harvested.

Sediment Yield. The amount of sediment given up by a watershed over a specified time period, usually a year. Ordinarily, it is expressed as tons, acre-feet, or cubic yards of sediment per unit of drainage area per year.

Soil Association. A mapping unit uaed on general soil maps, in which two or more defined taxonomic units occurring together in a characteristic pattern are combined because the scale of the map or the purpose for which it is being made does not require delineation of the individual soils.

Solitude. The state of being alone or remote from habitations; isolations. A lonely, unfrequented, or secluded place.

Terrestrial. Living or growing on land; not aquatic.

Threatened Species. Any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Unit. See Wilderness Study Area.

Unit Resource Analysis (URA). The syatem of data gathering and analysis that precedes land use planning for public lands (see Management Framework Plan).

Visitor Use. Visitor use of the wilderness resource for inspiration, stimulation, solitude, relaxation, education, pleasura, or satisfaction.

Visual Resource. The land, water, vegetative, animal, and other features that are visible on all lands.

Visual Resource Management (VRM) Class. The degree of visual change that is acceptable within the characteristic landscape. It is based on the physical and sociological characteriatics of any given homogeneous area and serves as a management objective.

Way. A path or course maintained solely by the passage of vehicles.

Wilderness Study Area (WSA). A roadlesa area which has been found to have wilderness characteristics (thus having the potential of being included in the National Wilderness System), and which has been subjected to intensive analysis by the Bureau and public review to determine wilderness suitability and is not yet the subject of a congressional decision regarding designation as wilderness.

Woodland. Forested land which is not capable of producing commercial sawtimber but does produce forest products like firewood, transplants, posts and poles, etc.

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